The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1638.—Vol. XXXVII. LONDON, SATURDAY, JANUARY 12, 1867. {STAMPED ....SIXPENCE. {UNSTAMPED..FIVEPENCE.

Mining Exchange, London.

MINING EXCHANGE, LONDON.—As the rules of the Mining Exchange PROHIBIT all its MEMBERS from ADVERTISING MINING SHARES at FIXED PRICES, the Committee feel it their duty to notify that they have no means of offering redress to such of the public as may deal with those advertising shares at fixed prices.
A List of the Members can be had on application to the Secretary. 1

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 23 years.)

HOLDERS of mining shares DIFFICULT OF SALE in the OPEN MARKET may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring ADVICE how to act in the DISPOSAL or ABANDONMENT of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

*** ELY VALLEY COLLIERY.—Prospectuses, forms of application, and a plan of the property may be had of Mr. CROFTS.

Mr. CROFTS having devoted his attention to the position of a large number of mines which have recently emerged from almost total forgetfulness into favourable notice, refers to his remarks on p. 21, in reference to a selection he has made of such mines, of which the following is a list, and confidently recommends purchases without delay :—

Drake Walls.	East Providence.	Pendeen.
Cook's Kitchen.	South Darren.	Rosewall Hill & Rans.
Great South Tolgus.	Bottle Hill.	Rosewarne United.
North Roskear.	East Bottle Hill.	South Condurrow.
South Basset.	Carn Camborne.	St. Ives Consols.
Bedol-Aur.	Copper Hill.	Wheal Kitty (St. Ag.)
Stray Park.	Grambler & St. Aubyn.	Wheal Kitty (Lelant).
West Basset.	Great Fortune.	Wheal Agar.
Wheal Crebor.	Nanglies.	Wheal Emma.
Great East Lovell.	Wheal Uny.	North Dolcoath.
Great South Chiverton.	North Downs.	Frank Mills.

Holders of any of the above will suit their own convenience as to further purchases ; but the writer believes that a more valuable list of speculative shares, almost at nominal prices, has never been laid before the mining public.
Bankers: National Bank of Scotland, Finch-lane. 2

WILLIAM LANE (SUCCESSOR TO JAMES LANE), 44, THREADNEEDLE STREET, LONDON, E.C., STOCK AND SHAREDEALER (Established Thirty Years), has FOR SALE the following SHARES :—

45 Caldbeck Fells, 16s.	50 Gt. Retallack, 38s. 6d.	10 North Phœnix, £1.
30 Chontales, £2 18s. 9d.	10 Great Laxey, £17 10s.	60 New Birch Tor, 9s. 6d.
50 Crebor, 12s. 6d.	25 Gt. No. Laxey, 32s 6d	20 Prosper Untd., £4 2 6
25 Carn Camborne, 24s 9d	20 Gt. So. Tolgus, 16s.	50 Prince of Wales, 31s 3d
10 Chiverton. £9⅛.	5 Great Vor, £17¾.	25 South Darren, 33s 6d.
10 Clifford, £9¼.	20 Gwydyr Park, 1s. 9d.	50 South Grenville, 9s 3d
50 Don Pedro, 21s.	5 Herodsfoot, £35.	50 Wh. Grenville, 28s.
25 Drake Walls, 17s 3d	15 Marke Valley, £4 13 9	25 W. Wh. Kitty, 11s 3d.
10 East Lovell, £10 2s 6d	50 Mineral Rights, 13s.	5 W. Chiverton, £56¼.
100 East Grenville, £2 7 6	1 Minera, £145.	5 West Caradon, £14.
10 East Caradon, £6 15s.	10 North Crofty.	3 Wheal Buller, £23.
25 Frank Mills, 37s.	25 N. Treskerby, £2 17 6	25 Wh. Uny, £1 17s.

CALDBECK FELLS (LIMITED), DRAKE WALLS, AND WEST CHIVERTON.—I strongly recommend these mines for a great rise in price. The latter is a dividend mine, and the two former will ere long enter the Dividend List.

Further particulars and other important information relative to both of these mines can be obtained on application to the above.

Clients and parties in the country wishing to dispose of shares will find this advertisement a ready means of doing so, by forwarding me a list of their holding.
Approved references given to any part of the United Kingdom.
Bankers : London and County Bank. 3

MR. LELEAN, ENGLISH AND FOREIGN STOCK AND SHAREDEALER,
11, ROYAL EXCHANGE, LONDON, E.C.
Bankers : Robarts, Lubbock, and Co., Lombard-street. 4

GUIDE TO INVESTORS.—MR. LELEAN'S STOCK, SHARE, AND FINANCE REGISTER for January contains the sixth of a series of articles on the whole circle of Investments—British and Foreign Stocks and Loans, Bank and Finance, Railway and Insurance, Gas and Water, and Manufacturing and Commercial Shares ; with such information as is necessary to guide intending investors amidst the shoals and quicksands of the multifarious species of investments that now present themselves.
Published by Pottle and Son, 14 and 15, Royal Exchange, London, E.C. 5

MR. WILLIAM SEWARD, STOCK AND SHAREDEALER,
19, THROGMORTON STREET, LONDON, E.C. 6

MESSRS. WILSON, WARD, AND CO., STOCK AND SHAREDEALERS,
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.
Can recommend two good mines for investment. 7

MR. WILLIAM WARD,
STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C. 8

GEORGE RICE, SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C. (25 years' experience), Member of the Mining Exchange, DEALS in MINING SHARES at close market prices of the day, as BUYER or SELLER, for cash or account.

	Closing prices.		Closing prices.
Bryn Gwiog	£12 – £15	Great Vor	£17 – £18
Chiverton	8 – 9	Great Fortune	6 – 8
Clifford	8⅛ – 9¼	Great Retallack	34s. – 36s.
Chiverton Moor	5⅛ – 6½	Marke Valley	4⅜ – 4⅝
East Basset	22 – 23	North Crofty	4⅞ – 5
East Chiverton	2 – 3	North Treskerby	2⅞ – 2⅞
East Grenville	2¼ – 2¼	Prince of Wales	29s. – 31s.
East Carn Brea	3 – 3¼	West Caradon	12 – 13
East Lovell	9⅛ – 10¼	Wheal Grenville	1⅜ – 1⅝
East Russell	2¼ – 2¾	Wheal Creber	10s. – 15s.
East Caradon	5¾ – 6¼	West Chiverton	55 – 56

M.B.—Some of the above shares must still further rise, as stated in my previous advertisements, whereas others should be sold at once, to secure a certain profit before the fall takes place.
Money advanced on mining shares.
Jan. 11, 1867. Bankers : Bank of England. 9

CHONTALES AND ST. JOHN DEL REY GOLD MINES.—GEORGE RICE deals in these shares, as BUYER or SELLER, at close prices, and being in possession of important information as to the prospects of the mines, can advise both speculators and shareholders when to buy or sell to their advantage.—Jan. 11, 1867. 10

CALDBECK FELLS LEAD MINES.—GEORGE RICE strongly recommends a purchase in these great mines, before shares attain their old price.—Jan. 11, 1867. 11

MR. G. D. SANDY, STOCK AND SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C., TRANSACTS BUSINESS in EVERY DESCRIPTION of STOCK EXCHANGE SECURITIES, MINING and FINANCIAL ENTERPRISES, at close market prices.

Mr. G. D. SANDY recommends the immediate purchase of New Tamar, Lovell Consols, and South Condurrow, as a rapid advance in price is certain to take place early in the ensuing year.

Mr. G. D. SANDY'S Circular for the present month should be perused by all interested in mining enterprise. Gratis, post free.
Correct Daily Price List may be had on application.
Money advanced to any amount on legitimate stocks and shares.
References exchanged. 12

MR. GEORGE BUDGE, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 19 years), has FOR SALE :—2 Minera, £143 ; 30 Mineral Rights, 9s. 6d. ; 100 Frontino and Bolivia, 6s. ; 50 Chontales, £3 1s. 6d. ; 100 United Mexican ; 20 Prince of Wales, 32s. ; 50 Great Retallack ; 40 Pestarena Gold, £1 18s. 9d. ; 50 Cuddra ; 100 West Wheal Kitty, 10s., call paid ; 200 Port Phillip ; 70 Okel Tor ; 100 East Bottle Hill ; 20 Maes-y-safn, £20 ; 10 North Crofty, £4¼ ; 100 South Grenville, 9s. ; 5 Buller ; 10 Caradon Consols, £11 1s. 3d. ; 20 East Russell ; 50 Great South Tolgus, 18s. ; 11 Great So. Chiverton, 5s. 3d. ; 20 South Condurrow.

Mr. BUDGE is a BUYER of 200 Great North Downs, 150 Hallenbeagle, 100 Anglo-Brazilian ; 50 Camborne Vean, 300 Pendeen, 50 North Treskerby, 2 Devon Great Consols, 70 East Lovell, 10 Chiverton Moor, 50 East Grenville, and 2 West Sharp Tor. 13

INVESTMENTS—TIN AND COPPER MINES.—PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," &c., of yesterday (Friday, January 11), No. 406, Vol. IX., price 6d. each copy, forwarded on application, contains important information to investors in Cornish and Devon mines, &c., with advice as to purchases and sales of shares, &c. Attention is therein directed to the merits of several mines, the shares in which should at once be purchased.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C. 14

CORNISH AND DEVON MINES—REVIEW FOR 1866.—Important remarks will be found in PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of yesterday, No. 406, Vol. IX., price 6d. each copy, forwarded on application, as to the past, present, and future of Cornish and Devon Mines, and as to buying and selling shares.
79, Old Broad-street, London, E.C. 15

MR. EDWARD COOKE, STOCK AND SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.
Has SPECIAL BUSINESS in Chontales, Prince of Wales, East Lovell, Frank Mills, South Darren, and West Caradon.
Is a BUYER of Prosper United at £3⅞, and North Crofty at £4⅛.
Shares either for cash or fortnightly settlements.
Stock Exchange securities dealt in at close market prices.
Satisfactory references given in any town in the United Kingdom.
Bankers : Alliance Bank. 16

MR. C. A. POWELL, SHAREDEALER, 78, OLD BROAD STREET, and MINING EXCHANGE, LONDON, E.C.
SPECIAL BUSINESS as BUYER or SELLER in West Chiverton, Chiverton, Chiverton Moor, Great Retallack, Prince of Wales, Chontales, Caldbeck Fells, and Frontino and Bolivia.
Parties having business in the above or other shares will be dealt with at nett prices, at a fair margin on the market quotations.
Jan. 11, 1867. Bankers : Bank of England. 17

MESSRS. McNEILL AND LONG, STOCK, SHARE, AND MINING DEALERS,
31, THREADNEEDLE STREET, LONDON, E.C. 18

MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C. 19

MR. JAMES HUME, 74, OLD BROAD STREET, LONDON, E.C. (Member of the Mining Exchange),
Bankers : The London Joint Stock Bank. 20

JOHN RISLEY, 32, LOMBARD STREET, and MINING EXCHANGE, LONDON, E.C., has SPECIAL BUSINESS in East Grenville, Wheal Buller, and West Caradon shares. 21

MESSRS. WARD AND JACKMAN, STOCK AND SHAREDEALERS,
CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Closing Prices, Friday Evening, January 11.

North Crofty	£ 4⅜ – £ 4⅞	West Caradon	£13¼ – £14¼
West Chiverton	54 – 56	Chiverton Moor	6 – 6½
East Caradon	6 – 6¼	South Basset	4 – 5

Messrs. WARD and JACKMAN refer their friends to their remarks on p. respecting the above mines.

Clifford	£ 8¾ – £ 9¼	Providence	£28 – £30
Cook's Kitchen	10½ – 11½	Chiverton	8¼ – 8¾
East Lovell	10 – 11	Tincroft	13½ – 14½
Great Laxey	17 – 18	Wheal Seton	132½ – 137½
Great Retallack	1¾ – 1⅞	Wheal Uny	1⅜ – 1⅞
Great Vor	17 – 18	West Frances	16 – 18
North Treskerby	2¾ – 3	Prince of Wales	29s. – 31s.

There are many shares in the above lists which should be sold at once to secure a certain profit, and no time should be lost.
Bankers : London and Westminster, Lothbury. 22

WILLIAM MICHELL is a BUYER of the FOLLOWING MINE SHARES, either for cash or the fortnightly settling :—

50 Great Retallack.	50 North Treskerby.	5 East Lovell.
50 North Crofty.	10 Clifford.	100 East Russell.
5 Carn Brea.	100 Prince of Wales.	50 Great North Downs.
25 East Carn Brea.	10 Cook's Kitchen.	20 North Roskear.

Parties wishing to sell will please state number and price.

FOR SALE :—		100 Grenville.
25 East Grenville.	2 Seton.	2 West Francis.

GREAT RETALLACK—"F. O. B."—You can prevent the sale of your shares by paying the calls and costs incurred. Should you allow them to be sold, the Court will only sell a sufficient number to pay your liability in calls and cost up to the present time. There is a good market for the shares just now.
Apply to WM. MICHELL, 42, Cornhill, London, E.C., Jan. 11, 1867. 23

MATTHEW GREENE, STOCK AND SHAREDEALER, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C., has BUSINESS in the FOLLOWING SHARES at the market price of the day, nett and free of commission :—

20 Great Laxey.	25 Prosper United.	15 East Carn Brea.
100 Prince of Wales.	20 Great North Laxey.	100 New Tamar.
50 North Crofty.	100 East Snaefell.	150 New Clifford.
5 East Basset.	10 East Caradon.	20 Westminster.

MATTHEW GREENE is always prepared to deal in Stock Exchange securities at close nett prices Bankers : Imperial Bank. 24

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 12 years), has FOR SALE the FOLLOWING SHARES, at nett prices :—

150 Frontino, 6s.	25 Gt. No. Laxey, 27s 6d	10 Grambler, £5⅞.
50 Mineral Rights, 10s 9d	20 East Bottle Hill, 5s.	120 Gt. So. Chiverton, 2s.
5 Gt. Wh. Vor, £17¾.	10 Chiverton, £8¾.	5 Clifford, £9 6s. 3d.
40 Chontales, 1-16th pm.	5 Cook's Kitc., £10 11 3	20 East Grenville, £2⅜.
10 East Caradon, £6⅜.	15 E. Carn Brea, £3 1 3.	25 G. So. Tolgus, 18s. 9d.
5 East Lovell, £10¾.	10 Gt. No. Downs, £3 18 9	40 S. Condurrow, 16s. 3d
50 G. Retallack, 35s. 6d.	20 No. Treskerby, £3.	10 Tincroft, £13⅜.
5 North Roskear, £6¾.	25 North Crofty, £4 18 9	1 Wheal Seton, £136¾.
4 W. Chiverton, £55⅛.	1 Wheal Buller, £24⅜.	15 Chiverton Moor, £5⅝.
30 Wheal Uny, 37s. 6d.	50 Prince of Wales, 31s 6	10 Stray Park, £4 8s. 9d.
5 West Caradon, £13⅜.	25 Prosper Untd., £3 18 9	3 East Basset, £22⅜.
25 Hallenbeagle, 10s. 6d.	40 Crebor, 11s. 3d.	30 Drake Walls, 17s. 6d.
20 Frank Mills, 35s. 6d.	25 Grenville, 28s. 9d.	15 East Russell, £2 11s.
20 E. Rosewarne, 11s. 9d.	10 Great Laxey, £17½.	1 Carn Brea, £16¼.
10 Marke Valley, £4 6 3	1 Wheal Basset, £76¼	40 Caldbeck Fells, 15s 6d

MR. E. GOMPERS, STOCK AND SHAREDEALER, 3, CROWN COURT, THREADNEEDLE STREET, LONDON.
PRINCE OF WALES MINE.—Mr. GOMPERS has much pleasure in informing his friends and the public that all he has hitherto stated as to the prospects of this mine appear now of short realisation, a telegram having been received at the office on Friday stating that a bore-hole had proved the lode in the 55. There can be no doubt but that a good lode will be cut in the course of a few days, and in the expectation of this great event Mr. GOMPERS advised his friends against parting with their shares some few weeks since. Mr. GOMPERS still says do not sell. 25

MR. R. EMERSON, 28, GREAT WINCHESTER STREET, LONDON, E.C., has the FOLLOWING SHARES FOR SALE at nett prices :—50 South Condurrow, 16s. ; 10 North Treskerby, £3½ ; 30 Great Retallack, 35s. ; 20 Westminster Lead (Limited), £5 (worth buying) ; 50 Wheal Crebor, 14s. ; 98 Dale, 1s. 6d. ; 50 Gwydyr Park, 2s. ; 5 Marke Valley, £4½ ; 30 North Dolcoath, 5s. 6d. ; 50 West Wheal Kitty, 5s. ; 25 Great South Tolgus, 16s. ; 200 Abraham Consols, 10s. ; 20 East Carn Brea, £3⅜ ; 100 Frontino ; 10 East Caradon, £6½ ; 50 Sortridge Consols, 2s. ; 100 East Bottle Hill, 5s. And a BUYER of 20 Clifford Amalgamated ; 20 West Frances ; 10 North Roskear ; 200 West St. Ives.
Advice given on the sale and purchase of shares.
Eighteen years' experience in Cornwall and thirteen in London. 27

INVESTMENT, LOAN, AND BANK AGENCY.—Established 1839.
BANKERS—London and County Bank.
This Agency undertakes the investment of Capital in British and Foreign Government Stocks and Joint-stock Companies upon advantageous terms.
Every information afforded to Capitalists, Trustees, and others, who seek investments of a strictly safe and eligible character.
Loans granted on Stocks and Shares having a market value, interest allowed upon deposits, and every description of Bank and Money Agency business transacted. CHARLES PETERS, Sec.
No. 12, Clement's-lane, Lombard-street, London, E.C. 28

MR. CHARLES THOMAS, MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER, 3, GREAT ST. HELEN'S, LONDON, E.C. 29

NORTH POOL MINE.—MR. CHARLES THOMAS has a NUMBER OF SHARES FOR SALE, for which no reasonable offer will be refused.—3, Great St. Helen's, London, E.C. 30

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER, UNION CHAMBERS, UNION COURT, OLD BROAD STREET, LONDON, E.C.
Mr. THOMAS has SPECIAL BUSINESS in Bottle Hill and East Bottle Hill. 31

MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE, LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, AND FINANCIAL AGENTS, transact business in all kinds of securities at closest nett prices for cash or account.
Parties of respectability can have transfers registered in their names previous to payment. Daily price list on application.
Bankers : London and County Bank. 32

SAFE INVESTMENTS FOR CAPITAL,
Paying 5 to 20 per cent. per annum upon the outlay.
SHAREHOLDERS, CAPITALISTS, TRUSTEES, and INVESTORS seeking valuable and reliable information, and requiring safe, sound, and profitable investments, should at all times consult
SHARP'S GENERAL INVESTMENT CIRCULAR
(Post free).
It is a safe guide, giving every information to shareholders and capitalists.
GRANVILLE SHARP, STOCK & SHAREDEALER, 32, POULTRY, LONDON. 33

MR. J. B. REYNOLDS, 70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C., has SPECIAL BUSINESS in—

North Crofty.	Wheal Chiverton.	Wheal Crebor.
Prince of Wales.	Chontales Gold.	Dale (Limited).
North Roskear.	Frontino Gold.	Marke Valley.
South Callington.	Gothic.	Great Retallack.
West Wheal Kitty.	Cuddra.	North Dolcoath.
	New Crow Hill.	

Mr. REYNOLDS never recollects a period so promising as the present for a quick rise in the price of good *bona fide* mining undertakings. His first Circular for 1867, now in course of preparation, will contain some startling facts relative to the past, present, and future prospects of this branch of industry.
Established Ten Years. Member of the Mining Exchange.
Bankers : City Bank. 34

MR. J. B. REYNOLDS.
OFFICES, 70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Business transacted in British and Foreign Stocks, Railway, Bank, Insurance, Financial, or Mining Companies Shares, and all Miscellaneous Securities, at the lowest market quotations.
Exchanges effected and purchasers found for shares not generally marketable.
Mr. REYNOLDS is a BUYER of any number of West Wheal Kitty shares. Sellers please state number and lowest price.
Telegrams promptly attended to. Established Ten Years.
Bankers : City Bank. 35

JAMES D. GENN AND CO., STOCK AND SHAREDEALERS,
3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C. 36

MR. THOMAS THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.
Mr. THOMPSON recommends the immediate purchase of Westminster, New Tamar, and New Clifford shares. 37

BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLERSBURY, LONDON, E.C.
Business transacted in every description of stocks and shares at lowest market prices, free of commission.
All communications will receive immediate attention, either personally or by letter.
N.B.—LOVELL CONSOLS having advanced again this week, intending investors should not delay purchasing at present low prices, £3 each.
Bankers : London and Westminster. 38

MR. EDWARD REWIS is a BUYER or SELLER for cash or account, or for dealings end of April, July, or September, 1867, in the undermentioned mines :—

Chiverton.	Chiverton Moor.	West Chiverton.
Westminster.	South Condurrow.	Prince of Wales.
Clifford.	Caldbeck Fells.	Great Vor.
Grenville.	North Crofty.	Dyfngwm.
Prosper United.	Wheal Buller.	West Caradon.
Chontales Gold.	Frontino and Bolivia.	Don Pedro No. del Rey.

Will sell 100 Wheal Chiverton in exchange for 1200 South Condurrow, delivery any time in 1867.
No. 8, Warnford-court, Bank, E.C., London. 39

MR. JOHN LITTLE, STOCK AND SHAREDEALER,
77, OLD BROAD STREET, LONDON, E.C. (late of Redruth).
Immediate attention to orders by telegraph or letter.
Prompt cash settlements. 40

JOSEPH J. REYNOLDS, Jun., UNION COURT, UNION CHAMBERS, OLD BROAD STREET, LONDON, E.C.
See letter on p. 21, for information on North Crofty and North Dolcoath, and full report in last week's Journal. 41

MR. JOHN HOSKING, MINING ENGINEER,
(Late of Ashburton, Devon).
Mr. HOSKING, having had 20 years' practical experience, OFFERS HIS SERVICES as MINE SURVEYOR, VALUER of MINING MACHINERY, or to INSPECT any MINING PROPERTY, either at home or abroad. Terms on application.—14, Liverpool-street, London, E.C. 42

MR. T. ROSEWARNE, 81, OLD BROAD STREET, is a BUYER of the FOLLOWING SHARES for cash or "time on :"—

*North Crofty.	*West Chiverton.	North Treskerby.
*Devon Consols.	*West Caradon.	Wheal Buller.
East Caradon.	*Chontales.	West Seton.
Herodsfoot.	*St. John del Rey.	*Wheal Seton.
*Marke Valley.	Caradon Consols.	Clifford.
South Caradon.	East Russell.	*East Lovell.
*Chiverton.	*Prince of Wales.	*Great North Downs.
*Great Retallack.	*Drake Walls.	*Gawton.
*East Basset.	Great Vor.	*East Grenville.

AN OFFER WANTED for New Trelawny, New Devon Consols, Lady Bertha, Old Gunnislake, Pendeen Consols, Dale, West Maria and Fortescue.
BUYER of any part of 500 New Tamar, for cash or "time on."
Parties who have bought in many mines through T. ROSEWARNE'S advice can now realise at 150 per cent. profit, and by so doing, could invest the money in other mines, which, no doubt, would pay them equally as well.
Money advanced on good mining shares.
Bankers : Bank of England and Consolidated.
Special information to be obtained on those mines marked thus.* 43

MESSRS. DEBENHAM AND CO.
No. 37, MOORGATE STREET, LONDON, E.C.
(and at ST. ALBANS),
TRANSACT BUSINESS in every description of STOCK EXCHANGE SECURITIES, MINING and MISCELLANEOUS SHARES, at close market prices.
Special business in Chontales, Prince of Wales, and Great Retallack shares. 44

MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.
Mining, Railway, and other Shares bought, sold, or exchanged. Shares for sale in mines and quarries that will pay 15 to 20 per cent. per annum.
Offices, 5, Finsbury-street, London, E.C. 45

MR. WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, continues to deal, at close market prices, in all good sound DIVIDEND and PROGRESSIVE MINES, either for cash or the account.
BUSINESS in the FOLLOWING MINES :—Great Vor, Trelawny, Emily Henrietta, Cook's Kitchen, New Clifford, East Basset, West Tolgus, Camborne Vean, West Frances, West minster, St. John del Rey, Don Pedro North del Rey, and Chontales.
Has BUSINESS in Anglo-Brazilian, and Frontino and Bolivia 46

Original Correspondence.

IMPROVEMENTS IN COAL MINING—No. IV.

PILLAR AND STALL AND LONGWALL WORKINGS COMPARED.

SIR,—Coal Getting, or Coal Producing, seems to divide itself into three primary divisions—Coal Getting or Cutting; 2, Hurrying, Ganging, Wagoning, Tramming, or Putting; 3, Ventilation. The first, or Coal Getting, is a very important subject, especially at the present time, as this is a branch the Royal Commission are expected to pay attention to—"Whether there is reason to believe that coal is wasted by bad working?" There is no branch of my subject admits of such variety of forms, systems, and modes of working as does "coal getting." Doubtless the earlier modes of procuring coal would be simply gathering the disintegrated pieces broken off or loosened by the action of the atmosphere from the "outcrop" of the beds that came to the surface, and would proceed from this to cutting or beating out with some kind of instruments. We will pass over the different stages of progress, to what we were 20 years since and what we are now.

Little more than 20 years ago a very large proportion of the coal got was cut out from the bulk, or whole seam, in strait or narrow work and stall work. To make the subject more plain and understandable, we will illustrate it by a familiar figure. The system of narrow work would be very well represented by a sheet of postage-stamps. The perforations representing the coal cut out, or that portion that is called strait or narrow work, and the heads or stamps the blocks of coal. These were again cut, and about two-thirds of the coal got; the rest left to support the roof.

We will first consider what is to be done in this kind of narrow work. The sheet of postage-stamps, to one unacquainted with colliery works or plans, would not convey an exactly correct idea, inasmuch as there are little bits left between the perforations, to sustain their connection. We must suppose the sheet to be spread on a table, with these little connections all cut out, and each stamp separate from its neighbour; then these divisions or openings between the stamps will represent the roads or places from which the coal is cut, thus making, as it were, so many openings or street-like passages. These passages or openings, which, indeed, are the streets of the underground city, through which the traffic is conveyed to the pit bottom, were very rarely more than 4½ ft. wide; this was cousidered for all practical purposes wide enough.

There were and still are seams of coal got of various thicknesses, from 1 ft. 4 in. up to 9 ft. and 10 ft. The Staffordshire thick bed much more; but the average of seams will be about 3 ft. or 3 ft. 6 in. Well then, to drive these passages a man cuts out 4½ ft. wide, the height 3 ft. 6 in., equal to an area of 15·75 ft. This road is cut or driven some 30, 40, and some even to 60 yards. A second is cut parallel to it about 20 yards from it. At some of the distances in the above level another road or cutting is commenced at right angles to the one running parallel to the first, until the two are connected, and this is one block, or in the sheet one head or stamp. This operation is continued with numerous others parallel, and connected by those at right angles, until the whole coal is cut out in separate blocks, like the whole sheet of postage-stamps. All this is looked upon as preparatory work. Having described the plan and the mode of proceeding with it, we will now look at the physical labour expended in doing it.

The physical labour expended is very great for the quantity of coal got as the result of that labour. First, we may say that all coal requires loosening or separating from the adjoining strata either on the top or immediately under. This is required the same whether a place be narrow or wide; so that in this, although the space cut out be only 4½ ft. wide, there is nothing more lost than in wider places. But coal requires to be loosened more than at the top or bottom. It requires to be loosened or separated at one or both sides—indeed, both sides and the bottom have to be loosened or separated. There are, then, the back and top still to be disconnected ere the coal is entirely dislodged or separated from the rest. But the back and top are the same in both wide and narrow places, so we will dispense with its consideration. Here, then, the bottom is to be loosened or separated from the subjacent stratum, and the two sides are to be cut from the coal adjoining, all of which is in the 4 ft. 6 in. wide. The result, or coal obtained, cannot be great compared with the work expended. Let us compare this with a place 90 feet wide. Whether a place be 90 feet or 4½ feet, the holing will have to be done, and two sides cut or loosened. If 90 feet wide requires only the two sides cutting, which is no more than the 4½ feet requires, it must be obvious there is a great deal of work saved in the former. In the 90 feet we have just 20 times the 4½ feet; but as the extremes in both cases are the same, by repeating the operation of the latter, there are 18 more cuttings to be done. These cuttings, in many parts of the country, cost 2s. per yard. In this case, then, the cutting alone on the 4½ ft., to get the same area, would cost 40s., while that on the 90 ft. would cost only 4s.—one-tenth, or 90 per cent. less than the other. This, of itself, is an immense saving of labour. Connected with it, there is also another immense saving, but as I am not taking a commercial view of the matter, I must leave it, and let the 90 per cent. of labour economised suffice to point out the improvement. What, then, in labour, does this represent? In most seams, thick or thin, 1 yard deep of coal, 30 yards wide should be cleared or sent out in a day. This is not beyond the practicable, for I know many collieries where 4 feet, and even 5 feet, 60 yards wide, are cleared in the day. Then, if there are 18 cuttings saved in one day, representing 36s., the labour saved is equal to six men, for few men would cut more than three such cuttings for a day's work, which would make him 6s.—about the average of colliers' wages now-a-days. I do not wish to convey the idea that this amount would be saved on every 90 feet of coal all over the seam, but for every 90 feet of coal cut out in strait or narrow work, as the roads were 4½ feet wide; this is its real representation. And, although there is not that amount of strait work done or cut there used to be, yet it is to be regretted there is a great deal more done than there ought, for, beyond a certain limit, it has ceased to be necessary.

There is also another point, on the expense of labour in narrow work. Now, we have said that a piece of strait work, such as we have taken, for instance, contains an area of 15·75 feet (sectional). Let us just look at a prison cell for a moment. Do not our sanitary engineers and philanthropists say a prison cell of 7 feet long, by about 5 feet wide, is too small for the confinement of any human being, so that a healthy constitution may be maintained. And, added to this, the body in such a cell is not kept by work in a state of perspiration, nor is there a lamp or candle consuming a large portion of the oxygen, and leaving the results of combustion. The cell would represent an area of 35 feet—more than double the place of work. In a place less than half the size of a prisoner's cell, with a candle burning, and the friction of all the tools, the results of blasting of (say) 1 lb. of powder, and the perspiration given off by a man during eight hours, must vitiate the air, and make the place such that a sixth of the man's labour is expended in overcoming this oppressive atmosphere.

Indeed, from my experience I have good grounds for saying that during the eight hours a man is at work in such a place, one-fourth of the vitality is exhausted or expended in oppression by the smallness of the space and the surrounding atmosphere—in fact, it is a common saying in all mining districts, if a man be suffering from some chest disease (which is very common), "He has been a man that has driven a deal of 'strait work' in his younger days." I have heard this remark scores of times, and in nearly all mining districts. I have seen and known men of this turn of working continue to do narrow work from their 20th to their 28th or 30th year, and then die. I know others, who have given it up earlier, not fit for any more hard work, and constantly under the doctor's hands. What does all this amount to? Let us try by an illustration to answer this question. If the effective labour of a collier be represented by 4, and his vitality or strength by 6; put him in a strait place, such as there are miles of, and the effect of his labour is expected to be 4. Now, one of two things he *must* do; the effect of his labour must be 3, or the expense of vitality must be 8; in the latter case he overdraws his natural strength by one-third. One of these must and will be the result. This lets us into the secret of the best miners always working in narrow work, because, by the force of their will, rather than their effect shall be 3, they will draw upon their resources and expend 8, which they do for eight or ten years, and at thirty they have so overdrawn their vital sources that their constitution is sixty years old, and instead of their allotted "threescore years and ten," their life is a trouble and their body an expense, until the vitality is unable longer to sustain the body, and they die old, exhausted men ere their years number half "threescore and ten."

Is it not, then, an improvement, and a step in the right direction, to dispense with this narrow work driving? It is; and I wonder that any person should continue to work on that principle. If a commercial drawback stood in the way it might be a plea for continuing, but such is not the case; on the contrary, the advantages commercially are numerous. A calm and unbiassed reflection will convince any person that the time has arrived for us to look upon "strait work" as a thing of the past. What a contrast between the "strait work" system and the long wall system! The former, as we have seen, is a very expensive mode—very exhaustive to the constitution, with very small results. In long wall there is plenty of room or area to work; no expensive waste of labour; the atmosphere healthy, and the results commensurate with the expense of labour given.

COLLIERY VIEWER.

[*To be continued in next week's Journal.*]

COLLIERY WORKINGS—No. IV.—SAFETY-LAMPS.

SIR,—The most hopeful, and the best informed on these matters do not anticipate that a means of entirely preventing explosions of fire-damp will ever be found within the capabilities of man; much has already been done, and, no doubt, much remains yet to do, before such catastrophes are reduced to a minimum. This ought to prove a sufficient incentive to stimulate all connected with coal mines to a careful observance of carrying out the rules and arrangements made for the safety and guidance of the miner, particularly when we take heed to the fact that the safety of such when gas is present, or may be apprehended, is depending in a great measure upon the careful observance on the part of the workmen of these said regulations. Now, in order to guard as much as possible against these accidents, two things evidently suggest themselves as essential—first, Efficient Ventilation; second, the Use of the Safety-Lamp. The former being a necessary agent in rendering the mine pure and respirable, diluting by its infusive force all noxious or deleterious gases evolved in the mine, conveying such through the return air-roads (passages specially arranged for their reception) to the upcast shaft, from which it is ejected into the atmosphere by the ventilating force employed. The latter is likewise a necessary element in all cases where gas may be apprehended, either from sudden irruptions or blowers, or from a regular exudation from the mine, inasmuch as in all mining operations, or at least in all manipulations, light is necessarily an essential to the carrying on of such operations; therefore, seeing that light is necessary, likewise bearing in mind that this element (light) is also the source from whence arises the danger apprehended of explosions, it becomes a question of very great importance how this light is to be put into our possession in a safe and convenient form, and not be, at the same time, an element of danger to all depending thereon.

Convenience, no doubt, has exerted a very powerful influence on the minds of miners generally in favour of using the candle, or naked light; consequently, to the prejudice of the safety-lamp. And for such temporary convenience, or advantage of gaining a little brighter light, they are often willing blindly to run the risk of tempting any danger which might be present, purely because such is not observable or visible. Such danger is increased in proportion to the number of hands employed who are called upon to use a safety-lamp, and from the fact of 200 or 300 lamps being in use by as many individuals, we must become impressed with the need that exists for each individual using the care necessary for the safety of the whole. Now, I hold that in mines known to throw off gas regularly, it is a matter of impossibility to ventilate such mines so as to leave all wastes and gobs clear of its presence; and, further, that where gobs are known to be charged with fire-damp, the exclusive use of the safety-lamp ought to be enforced beyond all points or stations in the main intake air-roads; such stations always being arranged so as to provide a spacious margin to meet any unforeseen contingencies that might occur. By the exclusive use of safety-lamps, I do not infer that such ought to be taken or looked upon as a guarantee of security, but rather to be used as an auxiliary to good and sufficient ventilation.

In describing the principles upon which this lamp is constructed, and becomes one of safety, it will be necessary to contrast light carburetted hydrogen gas with other more explosive gases—hydrogen, sulphuretted-hydrogen gas, olefiant gas, and carbonic oxide; all of which are capable of being inflamed by being brought in contact with heat of a low redness, whilst the fire-damp of the mine is incaple of being ignited unless brought into direct contact with flame, or a substance with a temperature equal to a white heat.

After many attempts made to construct a lamp to lessen the danger ever attending the presence of gas in situations where light was indispensable, Sir H. Davy happily availed himself of this principle in the construction of the safety-lamp, or Davy lamp, rendered still more safe and convenient by subsequent modifications. In prosecuting his experiments to attain this object he experienced great difficulty in exploding fire-damp through short metallic tubes, in some of which, 1-7th of an inch in diameter, and open to the atmosphere, he failed to explode it after repeated attempts. Upon this principle likewise Hemming's safety-jet was constructed, which is adapted for using the oxy-hydrogen—a most inflammable mixture of oxygen and hydrogen. Illustrative of the above principle, it may be stated that if a piece of copper be twisted, so as to form a spiral shape, and then placed over the flame of a candle, the flame will become extinguished, in consequence of the wire drawing away and absorbing that amount of heat, so as to render it incapable of existing as a flame; and if the spiral column surrounding the flame were formed of platinum, it would retain sufficient heat to rekindle the flame, which might be extinguished by being placed in an impure atmosphere. The construction of the safety-lamp is the same in principle, only differing in its modification; in the former case the flame is surrounded by a spiral coil of wire; and in the latter it is surrounded with a wire-gauze, having generally from 20 to 30 parallel wires to the inch, but 28 is the number most recommended by our mining engineers, or nearly 800 apertures to the square inch. The power of extinguishing the flame at its approach to the guaze being due to the size of the aperture is, consequently, increased in proportion to the smallness of such, but these being required likewise to admit air to sustain combustion in the lamp, as well as to emit light, it follows as a sequence that a size of mesh between these must be uniformly adopted, suitable to the requirements of both. A lamp with a gauze of the size of mesh above referred to is mentioned by Sir H. Davy as being tested by fire-damp. Sir H. Davy says—"In plunging a light, surrounded by a cylinder of fine wire-gauze, into an explosive mixture, I saw the whole cylinder become quietly and gradually filled with flame; the upper part of it soon appeared red-hot, yet no explosion was produced. It is easy at once to see that by increasing the cooling surface in the top, or in any part of the lamp, the heat acquired by it might be diminished to any degree." Immediately after this was fully ascertained, a number of experiments followed, to mature and render serviceable and practicable this principle, all of which proved evidently that it was the one to be adopted, being the only principle that deprived the fire-damp of its explosiveness, without at the same time creating a proportionate danger in the means and material used.

This lamp was introduced into the coal mines in the North of England in the beginning of the year 1816; simultaneously with it was one introduced by the late George Stephenson, called the Geordie Lamp. Whatever it could be that drew the attention of Stephenson to the principle upon which he first constructed his lamp has never transpired; genius, like divine inspiration, is not governed by the like laws in receiving impressions and discovering principles to which the ordinary class of mankind is subjected. We are well informed that the construction of the Davy lamp arose from a clear and comprehensive knowledge of the physical laws under which flame and gas are governed; of such knowledge Sir H. Davy availed himself, in adopting the principles of the same in the construction of his lamp. Now, the same cannot be urged in like manner with respect to Stephenson, when experimenting with his lamp at Killingworth Colliery; at all of which trials he subjected his lamp to he was ably assisted by the late Mr. N. Wood, whose youthful associations with that eminent engineer have never been sufficiently known or recognised; and presuming that this lamp was constructed partially from a knowledge of those physical laws which Sir H. Davy employed exclusively in the construction of his lamp, we can readily imagine the very high scientific attainments of the then young Mr. Wood, as affording a valuable and powerful auxiliary to Stephenson when prosecuting his practical improvements.

The difference between these two lamps at their simultaneous issue consisted in the flame of the Davy being enveloped exclusively by a wire gauze. Whilst in the Stephenson lamp, in addition to the wire gauze encircling the lamp, there is a glass cylinder immediately surrounding the flame, but at the first issue this lamp consisted of a metallic cylinder, with perforated holes all over it to emit light, this being encircled with a glass cylinder, but the gauze offering a greater degree of safety, as well as being capable of emitting more light, it was speedily substituted in the place of the perforated metallic cylinder, and instead of the glass being outside, as at its issue, it was placed inside the wire gauze, in which form we find the lamp at the present day. Since the introduction of those lamps modifications have brought them nearer to each other in their construction, the wire gauze in each case being the protection of the flame, the Davy depending exclusively upon the power which the gauze possesses and exercises in reducing the temperature of flame, so that it ceases to be luminous. The circumstances upon which the Davy depends for its security is, that if gas be heated to the temperature of white heat of metals, or other bodies, it will become luminous, the flame of the lamp being of that temperature, consequently when gas is brought under its influence it will be rendered luminous, and as such would impart its temperature to all gas which might be connected with it, were it not for the wire gauze encircling the flame. If an attempt be made to force the flame through a wire gauze, we find the difficulty increases in proportion to the fineness of the mesh. The cooling properties of such metallic gauze condense the luminous gas into a state of inactivity, so that each particle of elastic gas which passes these coolers is reduced in temperature much below the degree at which gas is luminous.

This wire gauze possessing great cooling powers, its effect upon a body of flame is to extinguish it. It does not prevent inflammable gas from passing through, yet it prevents its emission in a state of inflammability, consequently nothing can pass from the interior of a lamp properly constructed—that is, at a temperature sufficiently high to inflame an explosive atmosphere of the mine. The temperature of a metallic body, even when white-hot, is far below that of flame, therefore, when the wire gauze of a lamp is red-hot it will extract heat enough from the flame of fire-damp to extinguish it before it passes through the gauze. This principle will be sufficiently illustrated by submitting a flame protected by the ordinary wire gauze under the influence of an explosive atmosphere, the result of which will be found to be that of filling the interior of the gauze with flame, without manifesting the least capability of inflaming the surrounding atmosphere. But let me add that, although such tests may in every instance in which they are tried withstand the means employed, yet it approaches too near that point where danger may be apprehended to warrant the attempt, except as an experiment, where no danger exists. No doubt the capabilities of this lamp of enduring the effects of an explosive atmosphere surrounding it, and rendering the flame of it not only a harmless, but a necessary radiance, have led many soon after its introduction to trust implicitly to its protection; and, its capabilities of rendering its light safe and harmless to the observations of those testing it, have induced them to trust to its protection. Such a dependence tended much to place greater reliance upon the lamp than upon keeping up a sufficient current of air to dilute any gas which might be evolved in the mine. This was placing a dependence upon it for the results of which it never was intended to be held responsible, since which time explosions of fire-damp have occurred the causes of which have never been satisfactorily explained, although a most searching investigation was invariably made to obtain, as far as possible, the best information with a view to establish beyond doubt the causes, and afterwards have been obliged to acknowledge that the probabilities were that such had been caused by a defective lamp, arising either from an injury to it or by men tampering with it. These are two contingencies to which lamps are subjected, and such they are likely to remain so long as they are looked upon as only accidental and trivial offences.

C. HODGSON.

MR. ANSELL'S FIRE-DAMP INDICATOR, AND THE VENTILATION OF COAL MINES.

SIR,—I have laboured to show that Mr. Ansell's indicator may become of the utmost importance as the science of coal mining progresses, as it gives us the means of knowing, with little trouble, what the main return-air currents actually contain—at any rate, what fire-damp they contain. Without this instrument, or a similar one, this could only be arrived at by means of chemical analysis.

Mr. Hodgson has not told us how he substantiates his assertion that much less than 5 per cent. of this gas can be detected by means of the Davy lamp. I have over and over again pleaded for the adoption of this indicator in preference to the present "rule of thumb system." What I advocate is the adoption of this instrument, not as a substitute for any means at present used, but as auxiliary thereto. I have not misrepresented Mr. Hodgson, as his last letter fully proves. My letter contains only two leading features:—1. The detection of gas by means of the indicator and the Davy lamp. 2. The question as to the state of the main and district returns, or, as Mr. Hodgson puts it, "the circulating medium," being a test of the general condition as to the safety of a coal mine. Now, the first branch of the subject is not touched at all by Mr. Hodgson. What are we to infer from this reticence? And with respect to the second question, he proceeds to enforce and enlarge upon his former views, which, of course, he has a perfect right to do, and I have an equal right to support my views, which I will now proceed to do.

I contend still that, if a mine is properly laid out and ventilated, the state of the main and district returns is a sure test of the condition of the mine as to safety, and also that the goafs should be drained—they ought not to be allowed to become huge receptacles of gas, ready on a fall of the barometer to pour out large volumes of explosive mixtures. I have read with much interest the account Mr. Hodgson gives of one of those reservoirs, and have no hesitation in stating that the practice of making such places, and leaving them in that position, is very far behind indeed; but, perhaps, his account refers to what was done many years back. I cannot pursue this subject further without putting in diagrams, which I am quite willing to do if room can be found for them, when I will show how goafs are drained and ventilated at the present time in a fiery colliery. I will not deal in theories, but show what is actually done at the present moment; and, of course, the plan alluded to shall be correctly copied from a working plan.—*Newcastle, Jan. 9.*

M. E.

COAL STATISTICS VERSUS COAL STRIKES.

SIR,—The points of difference between "A Looker-On" and Mr. Ruglen may now be brought down into a narrow compass. Mr. Ruglen published a fearful account of the decline of the coal trade of Yorkshire, as compared with Northumberland, Durham, Derbyshire, and Lancashire, and he attributed this solely to the Unions, strikes, and lock-outs, which had become chronic in Yorkshire. To demonstrate this, he gave certain facts and figures of certain years only, and these did certainly show a very dismal account against poor Yorkshire and its Unions. I merely show that Mr. Ruglen had what they called *cooked* the figures, and *selected* the facts, so that by giving number of mines without product, and product without number of mines, at various periods, he "startled" readers by his "elucidations." Mr. Ruglen now admits he did select—in other words, "cook" the accounts, and he now does what he ought to have done at first—give us a series of statistics consecutively, placing before us the full facts, instead of "selections," to prove a foregone conclusion only; yet his figures *do not prove this.* I grant, and did from the first, that strikes and lock-outs stop production; that it did not need Mr. Ruglen's statistics to prove what is both *old* and true. I admit, further, that Northumberland, Durham, Lancashire, and even Derbyshire, have increased in the coal trade over Yorkshire. But I deny altogether that the facts and phenomena before us can be explained upon the supposition that the whole of the results are due to having Unions or to having no Unions. Mr. Ruglen is pleased to divide 12 years' production into two sizes, and to say that the first period was without and the second with Unions, strikes, and lock-outs. Now,

this is not correct. They had strong and well organised Unions in Northumberland and Durham in the first period, and both Barnsley and Lancashire had Unions and strikes before 860. Northumberland, Durham, and Lancashire have Unions at this day *as strong*, well organised, and worth *more in funds* than Yorkshire has. So we see that the progress of Northumberland has not been stopped by Unions, nor Lancashire by strikes, for both districts have had both strikes and lock-outs, as large and injurious as Yorkshire has. And we may infer also that the decline of the number of mines in Derbyshire has not arisen from the absence of Unions, and that its production has, therefore, increased.

In truth, there are many causes for the fluctuation, decline, and growth of the coal trade. Northumberland and Durham have grown over Yorkshire by their superior sea-board facilities; and, as I showed before, by the rise and growth of the iron districts of Cleveland, wholly supplied by millions of tons during the latter period introduced by Mr. Ruglen. But it does not, therefore, follow that Yorkshire has declined owing to Unions. Does not Mr, Ruglen know that they had Unions, and have still, as well as Yorkshire? We thus see that the whole conclusion, "immediately designed" by Mr. Rugien's "startling elucidations," is wholly groundless," either in logic or fact. The fact is, he has just got up a purely sensational statement. In the same way we have just been startled with further alarm, from the *Times* downwards, that our foreign trade is ruined by Belgium, Switzerland, and France; and that, too, has taken amazingly, and doubtless paid its writers "excellently well." But it is not true. For the *Times* itself, on the 1st, says that "1865 gave the largest export returns on record, and that 1866 will show an increase of 15 per cent.;" and that "we are now more than ever in a condition to command the commerce of the whole world." Now the *Times* knew this when it published statistics to prove that we were done for, and that Belgium was king. So, in the same way, Mr. Rugien knew that at the time he was scare-crowing respectable old capitalist ladies with the trade of Yorkshire being ruined, the Yorkshire coal trade was never so productive or well employed before.

A LOOKER-ON.

THE MINING INTERESTS IN 1866.

SIR,—The holidays are over, and, as usual, the season of festivity is succeeded by renewed activity in business. The year upon which we have entered gives promise of prosperity, and men are already up and doing. If with the coming spring we have the brisk trade which all competent to judge predict, it is discreet to look back upon the past year and glean the lessons of wisdom its experience leaves, and also to examine "the signs of the times," as they are now indicated upon the dial of the present. The year 1866 was a remarkable one. Although neither the world nor "the dispensation" came to an end, as certain grave Doctors of Divinity foretold, a great many hopes, speculations, and interests perished. Of many undertakings one hears a great deal that is very good, but it is the first and last of the kind that we do hear concerning them. They are like ærolites, which flash brilliantly and suddenly in the fires which consume them, and go out into the blackness of darkness for ever. The year 1866 taught us a great deal aoout "the shooting stars" of commerce, and we ought to reflect upon the phenomena we were constrained to observe. The mining interest suffered much during the past year, yet mining investment was obnoxious to less calamity than occurred to capital in innumerable other pursuits. "The rest and be thankful" policy of the late Premier in politics was, at all events, applicable to the men whose money was employed in various progressive mines in the United Kingdom. They have not rested in vain, "nor spent their strength for nought;" but, having held fast by their anchor until the storm subsided and the billows sunk into placidity, they can now direct their course as judgment and opportunity dictate. The depreciation in the value of all stocks and shares during the past year has been truly wonderful, and in this mining shares participated. The following table shows the depreciation in the price of the principal dividend-paying mining shares since the corresponding date of last year in the counties of Cornwall, Devon, and in the Ise of Man:—

Company.	Jan., 1866. Share price.	Jan., 1867. Share price.	Produce.	Decrease in value of property.
Tincroft	£ 29	£ 14	Tin	£ 36,000
Great Wheal Vor	33	18	Tin	91,620
West Chiverton	80	55	Lead	75,000
Clifford Amalgamated	20	10	Copper	28,800
Wheal Seton	220	130	Copper	35,640
Devon Great Consols	595	400	Copper	199,680
Providence	39	30	Tin	10,080
Great Laxey	21	18	Lead	45,000
West Seton	185	130	Copper	22,000
Wheal Basset	90	70	Copper	10,240

These are very terrible results of the great panic of 1866. The cause is not wholly in the general state of trade and in the condition of the money market. At no period in our commercial history were the great staple trades of the country so little affected by a monetary panic, as is proved by our exports, and, so far as mining is concerned, by our exports in minerals, metals, and in articles fabricated from metals. Several coincident circumstances tended to depress the metal market. When the panic supervened stocks were large, and, of course, in the face of those heavy stocks there was decreased demand. This was particularly the case with tin. In working this metal, also, great efforts were made to enlarge the margin of profit by increased production. Probably, one cause of the depreciated value of shares in Cornish and Devon mines operated more than any other, and yet has been generally overlooked—no important discoveries were made. At no period in the history of the two great western counties was there such an absence of discoveries of any magnitude. This fact would operate in lessening the prospective value of the properties and the current price of shares, but, at the same time, put a check on the "bulls" and "bears." In mining there is no standing still with impunity. The mine which does not increase is popularly believed to retrograde. The secession in prices produced terrible havoc in the county of Cornwall. The works were suspended in many mines, and some were abandoned. In West Cornwall one mine stopped after an expenditure of 8000*l.*, another after 30,000*l.* had been expended, and a third after an outlay of 40,000*l.* Some were taken up by other companies. The Fates frowned alike upon those worked upon the Cost-book Principle (as the majority of the mines in the West are) and those worked upon the Limited Liability. One of the latter stopped after an expenditure of 25,000*l.* Wide-spread distress ensued. Between 4000 and 5000 Cornishmen emigrated, nearly 2000 found occupation in the Scottish coal and iron mines, and thousands more in those of the North of England, and yet many remained in deep and pitiable distress. Yet, terrible as the visitation was to the miniug interest, shares in every other description of enterprise were depreciated in greater proportion, and in most cases in *much* greater proportion. Finance companies, banks, railways, canals, building speculations, all suffered far more than mines. The returns of the Board of Trade vindicate, as usual, the mining interest from prejudice, and show that it is one of the most important of all our industries. More considerably than one-fourth of our entire exports were minerals, or things made of minerals. Coal and iron, of course, lead in this department, and tin follows next. The amount of the exported value of tin-plates exported is scarcely less than half a million sterling. Lead, also, had an increase to the value of 153,000*l.*, in round numbers. In the exports and home consumption, also, of the present year metals will take a far higher proportionate figure, as everything now presented to our view seems to premise. The year opens free from the complications of the past year in every respect but one—the increasing armaments of continental nations.

In January of last year, incidental to foreign loans and railway company disclosures, the first presage of the panic appeared, like gathering clouds in the horizon, which the coming storm drives before its path. In February, confidence in financing institutions was whispered down in the City. In March, the depreciation in stocks and shares almost amounted to a panic, and created quite a panic in April and the beginning of May, before the great Overend and Gurney bubble burst. Whatever hope there might have been of checking the rush of disaster, the crash of that establishment destroyed. The action of the Bank of England retaining a high rate of interest to bring back gold utterly failed to accomplish that, but, instead, destroyed British credit on the Continent. The old theory as to the mode of bringing back gold signally failed. No wonder that with Central, Eastern, Southern, and part of Western Europe agitated or convulsed, with the United States of America still disorganised, with our American frontiers threatened by invasion, political assassinations occurring in the Irish capital, and a bad harvest at home, there should be confusion and dismay. Had our monetary system been capable of bearing the strain, all might have gone well, or, at all events, much better; as it was, no relief came whence it might have been reasonably expected. How different the state of affairs now. Money is plentiful, monetary business on a better footing, the revenue increasing in spite of diminished taxation, peace abroad, treason cowed in Ireland and in our colonies, and trade reviving. Already the mining interest feels the breath of this new life. The copper standard has been raised considerably since the opening of the new year. Stocks of both tin and copper are extremely low, and the orders in the former branch of our mining industry are numerous and increasing. There can be little doubt of a settlement of the great intestine difficulty of North and South in the United States, the pacification of Mexico, the South American Republics, and the conclusion of peace between Spain and such of the South American Republics as are at war with her. The tranquility of the American continent would cause an immense demand for our iron and tin, and for manufactures into which these metals enter. Should there be some good discoveries in Cornwall and Devon, the favourable progress of metallic mining matters would be more rapid. At all events, hope deferred has this time returned with health and gladness to the enterprising. Never was there a period so replete with promise for investors. There is no knowing what profits may be realised, even in a few months, upon investments now judiciously made. *Verbum sat.*

Gresham House, London.

THOMAS SPARGO.

THE CHINA-CLAY TRADE.

SIR,—So little is known to the general public of the great value and the gradual but extensive development of the China-Clay Trade, that I am induced to jot down a few particulars of the manufacture of this important material, and if you should deem them worthy of insertion in the Journal, shall be pleased to think that I have contributed to the further progress of a branch of industry which bids fair to find occupation for many now unemployed in consequence of the depression at present existing in the Cornish mining trade. China-clay, or soft growan, resembles in every respect kaolin, from which the Chinese manufacture porcelain china, and the china-stone possibly represents Petuntse. There is an immense and ever-increasing demand for both, and the facility and certainty with which they can be made ready for the market render their production most lucrative, when a good bed of clay or quarry of stone can be found. The principal clay district is that near St. Austell, where the works, however, are getting deep, thereby requiring steam-power and other expensive methods of washing and raising clay; for the purpose, therefore, of showing the whole process from the first intimation or accidental discovery of the presence of china-clay in a tract of land, I shall select the new district in the neighbourhood of Blisland as the foundation of these remarks. The first operation, then, consists in thoroughly ascertaining that the amount of clay beneath the surface of the ground would justify a further expenditure. This is accomplished by sinking shafts to a considerable depth over the piece of ground. If the result is satisfactory—that is to say, if the clay does not vary in quality in any of the pits, and is not unbottomed—it may fairly be assumed that clay exists in great quantities. In places, where the clay is found on the side of a hill, little difficulty is to be met with in forming a stope over which a stream of water is directed, separating the clay from the sand and mica which form the other component parts of soft growan; these latter are retained in catch-pits or pools, placed in proper situations in the leat, as the drain through which the water and clay flow is called. The clay is finally deposited, freed from impurities, in tanks or pans prepared for that purpose. After remaining in these for some time, to get rid of the superfluous moisture, it is subjected to the process of drying or hardening; this may be accomplished by exposure to sun and wind, but as this plan is not expeditious, and only available during the summer months, the following method has been adopted, securing at once celerity and cleanliness, both most important considerations.

A shed is built, at the back of which is constructed a trough or pan, usually about 9 ft. wide by 1½ ft. deep, and varying in length according to the size of the dry-house; it is built of fire-proof bricks, covered by tiles; at one end is a furnace, and under the whole length are flues leading to the stack. Into this pan the clay is allowed to run through traps at the back of the house, and the heat of the furnace and flues quickly hardens the clay, when it is removed by labourers in lumps a foot or so square; an operation performed with much dexterity by the men's long-handled shovels. The clay is then ready for exportation, sometimes being placed in the railway trucks and ships' holds, as it is, and occasionally packed in substantial casks.

When, however, the clay-bed is situate on a level ground it becomes necessary to employ machinery, and the clay, mica, and water are turned together, the sand having been previously removed by manual labour into a shaft or well, into which is introduced a pump, usually worked by water-power, which throws the mixture into what are termed the mica beds, a series of traps which effectually separate the mica from the clay and water. The succeeding stages of the process are the same as those previously described. I may add that for many years the manufacture and sale of china-clay has been exclusively confined to the enterprise of local adventurers, great jealousy being manifested by them in affording information, or in making generally known the value and slight risk attending this speculation. There can, however, be little doubt that a free trade in this, as in all other produce, must eventually obtain, and if this letter forwards that consummation, the writer will not consider his time or trouble thrown away. No doubt much of the apathy manifested towards this branch of Cornish industry may be traced to the lack of excitement as compared with mining operations, but to the man who wishes to make something more than 4 or 5 per cent. for his money, and yet does not care to risk it in anything of the very speculative nature of a new mine, china-clay offers, with prudence in selecting the work and agents, a certain 20 or 30 per cent on outlay. Before the discovery of the new china-clay district the exports averaged about 100,000 tons per annum, of the value of upwards of 300,000*l.*; the number of persons employed varied between 8000 and 10,000. Energy and capital would quickly double these figures to the advantage of new speculators, and without detriment to the old, the demand being always in excess of the supply.

KAOLIN.

ALGERIA—No. VIII.

SIR,—Of all benefits that can be presented to a country in modern days a railway is undoubtedly the greatest. It was not without a pang that most true-born Englishmen felt the departure from England of that great institution the mail coach. Any person now standing in the streets of Philipville just at dusk in the evening, and seeing the start for Constantine of the eight-horsed diligence, with its wild dash and echo, the horses all galloping—nearly racing—the merry bells ringing, cannot but feel the impending fate of its extinguishment, some two years hence, by means of our modern friend the horse of iron; and, perchance, many an old Algerian then will heave a sigh at the innovation. Nevertheless, the advent of this epoch will be the greatest day ever witnessed by Algeria. I have observed the way the French engineers are doing their work on this great line from Philipville up to Constantine—that is, from the sea to the capital, which is in the middle of the country. I have taken the trouble to measure the angle of the slopes of their cuttings, and I can undertake to pronounce that they will never have any trouble with falls from the sides. All are cut off to an angle of 45°; and so done completely, once and for ever their embankments are solid and well constructed, and their tunnels are skilfully made. When I was on the top of the centre shaft of the centre tunnel, at El Cantara, looking around upon the wonderful panorama below me, I thought to myself—"El Cantara! I must know that name," and it brought back to my mind the scene depicted by that magician of language, Cervantes. I think it was at El Cantara that Don Quixote released that remarkable convict, Gil Perez, the rascal immediately afterwards unhorsing his deliverers by means of a fragment of rock he had picked up on the road, and winding up the adventure by robbing Sancho of his donkey, and riding off quite satisfied with his exploit. Perhaps, with the inward satisfaction "of a good man, who'd done a virtuous action." Indeed, many things in this country call to mind the fact that the few years that the author of Don Quixote spent in Barbary he did not spend in vain; the little "painted warblers" in the mornings, saluting Aurora, he never could have heard to such advantage as in Algeria. The beauty and perfection of plumage, and the perfect and singing note, seem to speak of a land where winter is unknown. But to return to the shaft on the top of the tunnel of El Cantara. It was 30 fms. deep, and for several fathoms it had been sinking in a dark, greasy shale. A few days after we arrived at Philipville, the engineer, whom we knew, wrote a note to Mr. Brodie, informing him that the railway tunnel had passed through a bed of anthracite coal of 6 ft. thick, sending us a specimen of the coal—a coal of a fine quality, but I have not had it analysed. Let us consider this matter a little. There can be but little doubt that this railway will in every way turn to the greatest benefit for Algeria. Here, at the summit ground, in the middle of the country, 30 miles from the sea, and 30 miles from the internal city of Constantine, is discovered a mass of coal, easily transportable by rail to every part of the country. Who shall say what may be its value? Again, there is a theory that suggests that in the country of oil-springs it is generally found that the sub-rock is underlain by beds of anthracite, and that it is possible that the oily element of the anthracite, then a bituminous coal, had been evaporated by heat, and carried into the shales above, converting them into that sort of property which our transatlantic cousins so much delight in prospecting, the "hile-spring." I really believe that there will be strata of shale, impregnated with oil, found in these 30 fathoms of beds covering this formation of anthracite. And who shall say what will be the benefit of such valuable discoveries to a country where the light of science is now only again breaking? It is strange that an age, and a people who could reason out the elements of Algebra, and form them into the most perfect science of calculation ever invented by the human brain, should not have dreamt of dealing with the great material sub-riches of the country. But it is just the same everywhere. Here in England, 200 years ago, the tinner, searching for tin, a mineral much more difficult to detect by the eye than copper, threw aside the copper ore as a useless, not to say a pernicious, commodity, while now it is valued as one of the most useful and precious of the native products of Great Britain. So it is that the valuable products of countries are developed, and we shall not have long to wait after the railway is completed before we see Algerian coal companies formed—companies for working her quicksilver, silver, iron, copper, blende, and antimony, and, from what I saw of the beds and veins, there is every chance of their being highly remunerated for their investment. All those sources of prosperity now await the completion of the railway, which is being simultaneously made throughout the whole distance of Philipville and Constantine. The end tunnels are making; that at the sea has pierced through the hill, and is now being lined with mason-work as rapidly as possible. All along the sides of the hills we saw strong companies of men at work, and I traversed the line for the whole 60 miles. There are a few croakers, as there are in this country, who believe it will not do so much good. They ask what are to become of all those poor Arabs driving down the thousands of sheep from the upper plains to the sea for export? I answer that they will find more useful employment in cultivating their rich plains for grain, which will find a higher value as soon as the whole world is open to give them their bidding. At present their only market is Constantine, with its 40,000 inhabitants. But not only grain, but various sources of industry will be stimulated by the railway—mines, manufactories, and other germs of wealth, that have lain idle and dormant for centuries.

COPPER MINER.

THE MINERAL AND INDUSTRIAL RESOURCES OF NEWFOUNDLAND—No. II.

SIR,—In recording, as I have done, to the best of my ability, facts and reflections upon several of the features of interest with which Newfoundland abounds, I have reserved for this paper that portion of the subject which, I am well aware, will afford the greatest attraction to the class of readers for whose edification and amusement the pages of your valuable Journal are most peculiarly adapted. The following particulars of the geological and mineralogical resources of this island being the result of actual observation of one who has enjoyed every facility of investigation which a long and practical experience affords, will render the observations more reliable than any which might emanate from a mere casual visitor, however scientific his capabilities or florid his diction. I may add that the sole objects by which I was actuated in thus trespassing upon your space and your reader's patience are to induce others acquainted with the locality to emulate my example, and to unite their efforts with mine to make the Mother Country thoroughly acquainted with a settlement that must, ere long, exercise a most beneficial and lasting influence upon her welfare. Efforts to determine the vast resources of Newfoundland are, up to the present time, attended with great and almost insurmountable difficulties, owing, in a measure, to the luxuriant growth of lichens and other vestiges of vegetable life over the surface of the ground in every direction. In many parts, especially where the moisture has permeated the soil, the combined influences of water and decayed vegetation have engendered extensive and deep morasses, but where these are drained, the natural character of the subsoil exhibits itself. There are also extensive tracts, especially on the sea-board and along the margins of the numerous rivers and brooks, where researches have been successfully pursued.

I commence at the extreme west of the island—Cape Ray, which is a low, rugged point, formed of dusty coloured trap-rock, intersected in places with coarse-grained granitic ranges, varying in colour from pink to grey, intermingled occasionally with mica-slate and felspar. These ranges present a peculiar aspect, for granite, of being overlapped or round-topped. A little further inland they are flanked by bogs of a depth, in some places, of upwards of 10 feet, the expanse of which presents the appearance of a sea, or black water that had been frozen into stillness, more especially at night time. On a dreary campaign through the country, not a tree or patch of brushwood, or a single bush appears to break the monotony of the scene, or to direct the steps of an adventurous traveller, who may be disposed to cross its dreary and trackless course; whilst, as far as the eye can reach, the scene terminates on all sides. It may be truly said that "distance lends enchantment to the view;" for to the existence of far-away irregularities of surface the scenery is indebted for anything of interest, or of relief to the strained visual organ.

These ranges are succeeded by gneiss, which again gives place to a hungry granitic territory. Grauwacke, or conglomerate, is now found associated in tortuous strata, whilst veins and stripes intermingle with gneiss, the whole combination being strongly indicative of metallic deposits. A little north-east of this locality a carboniferous series exists, and, as a natural sequence, coal is found of a good quality about 8 or 10 miles up from the mouth of the Great and Little Barrisway Rivers; also it was said to be discovered by Mr. Jukes, in his geological survey in 1843, at the Grand Pond, which distance is about 15 miles from the sea, and the size of the Pond being 50 miles long by 4 to 5 miles in breadth. The cliffs from Great Cod Roy River to Cape Anguille are chiefly composed of the Old Red and variegated Sandstones abutting upon a carboniferous series yielding coal. This invaluable mineral also lies exposed in strata in the beds and banks of a rivulet between the first and second Barrisway Rivers, about 7 or 8 miles from its mouth. Altogether this district may be justly designated the "black country" of Newfoundland, and is well worthy the fostering care and investigation of the Imperial Government, who, whilst exerting great pains, and devoting large sums of money in surveying the districts of Nova Scotia, New Brunswick, and the Canadas, and elaborating large and valuable geological maps upon these highly favoured colonies, have hitherto exhibited an unaccountable supineness towards the richer, and, perhaps, more important settlement of Newfoundland. It may be well to notice that both sulphurous and saline springs exist in this highly interesting locality, the former strongly impregnated. I must not omit also to mention that a few miles to the north of Little Barrisway River there is a vertical stratum of deep-green coloured rock, resembling *verd antique*, running through the gypsum deposit; beds of the latter are occasionally to be seen outcropping here and there along the shore. Nor is the *verd antique* a rare mineral in this vicinity, as the Indians, for years past, have been known to bring it out of the country while employed in their hunting expeditions, and of it to make their pipes, upon which they set great value.

During the summer of 1854 I had occasion to examine this highly interesting coast, and was much pleased with its mineralised and romantic appearance. From Cape St. George to Port au Port, whose bay consists of argillaceous schist, limestone, and bituminous shale, the latter containing large quantities of iron pyrites, also iron in more manageable forms and combinations, as oxides, carbonates, and silicates, together with valuable deposits of silver-lead ore, form the staple mineral characteristics. I should further remark that this portion of country is the most interesting to the geological and mineralogical explorer I have seen during my travels in the country; and, if judiciously explored, and a sufficient capital raised, would, in the course of a few years, be the means of giving employment to hundreds of

people. Inexhaustible quantities of lead, lime, gypsum, timber, fish, and, in all probability, beneath the shale, extensive beds of coal occur. I give these few remarks to induce the Colonial Government in future to give encouragement to explorers and capitalists.

A hilly ridge eastward of St. George's Bay, about the centre of the island, in the Savannah country, presents the aspect of a brown coloured rock, and appears to be strongly impregnated with iron. Here is serpentine alternating with angular blocks of quartz, whilst other rocks combine noble serpentine, varying in colour from dark green to yellow, in strata of one yard in width, with steatite or soapstone, *verd antique*, diallage, and various other magnesian rocks; and on these lay heaps of abestos, rock-cork, rock-leather, and other materials *sui generis*. To this interesting ridge Cormack, the enterprising pioneer of Newfoundland, mineralogist and explorer, gave the name of Jameson's Mountains. Beyond, and intermingled with the low ground at the foot of the mountain, the Savannah, the prairies of the island, stretch in every direction, and cover a vast tract of land with their almost impenetrable lichens. A few spots partially cleared of vegetation have revealed the fact that beneath the surface much and varied mineral treasure lies hid. Future explorers will, in course of time, reap a golden harvest from the prosecution of a diligent search, and wonder at the indifference of bygone generations, who possessing the incentives to labour, and the adaptations, mental and physical, for work, have relaxed their energies at the very threshold of discovery.

41, *Threadneedle-street, London.* H. T. VERRAN,
Mining Engineer.

HOME INDUSTRY FOR ENGLISH CAPITAL.

SIR,—The question at present is, How can money be invested, and in what description of security? From recent events it must be apparent to the thinking part of the public that overgrown and worn-out concerns have not answered expectation; neither have the majority of foreign speculations. Gigantic speculations of every description require time, as well as capital, to develope them. It is to be hoped that the public will not so eagerly jump at foreign concessions, without consideration; for example, a company just brought forward to improve foreign cities may be all very well in its way, where a third part of the capital is charged for getting the concession or grant. Belgium is already competing with this country in our heavy metallic business; at this rate, if continued, Great Britain will soon become Little Britain. Are there not equally good investments at home, where the capital is not lost to the country, if not immediately profitable to the investor? Doubtless capital can be directed to some channels on much better terms than in the majority of speculations abroad, where years are required to open up roads for the transit of the produce when found; but the secret is, that something abroad, where no one can visit, must be marvellously tempting, and if it can be introduced on the Stock Exchange and quoted at a premium it is sure to take—Overend and Co. and a dozen other great companies to wit. It behoves those interested in the land in this country to take warning, and meet the question by a little liberality, for in years past very little liberality has been shown by the majority of landowners to capitalists or speculators; this is one of the crying evils of the present day, and the principal cause why so much mineral is brought into this country at the present time. It is to be hoped with the New Year new ideas will present themselves to many of the possessors of lands in this country, and manifest some little interest for the labourers, ere the majority of them are compelled to leave their native country, when these lands would become next to valueless, owing to competition in the article, as well as the want of skilled labour to produce the wealth.

Jan. 7. A READER OF THE JOURNAL.

CARNARVONSHIRE CONSOLS.

SIR,—Pray permit one who has invested what is to her a very serious sum, amounting to several hundred pounds, in this company, to remonstrate, as a shareholder, against a "committee of directors" dragging us into the Court of Chancery, and spending our money, to effect what may be easily and much more quickly effected without any material cost. Mr. Lelean, as it appears, is willing to settle all disputes by *arbitration*; why, then, are our funds to be wasted, just to gratify the caprices of these directors? I do hope that these gentlemen will be held personally responsible for their reckless waste of our funds.

A POOR LADY.

OLD WHEAL RUSSELL—SOUTH BEDFORD.

SIR,—A writer in last week's Journal, under this heading, states that he has "taken some pains to ascertain the cause of the dispute in question, and to ascertain the facts of the case, and from all I can learn from parties conversant with the mines, maps, and boundaries, I believe there cannot be a doubt amongst honourable mining men that this lode belongs to the South Bedford Mining Company, and to that company only, and that Old Russell has no more claim to it than the shareholders in the Devon Great Consols." His signature is "Justice," but his letter is full of misstatements.

The South Bedford Company's lease plainly says their limits south are the Impham stream of water, than which nothing can be more clear. On the plan a pink line shows the Russell boundary further south, and this is made the pretence for an absurd and unfounded claim that the plain description of the lease shall be set aside. The South Bedford Company have always consistently refused to spend a farthing on the 75 fms. so claimed, and by misrepresentation allowed the Russell Company to expend 1000*l.* upon it. A valuable discovery having been made by this outlay, and the attention of the Duke of Bedford's agent directed to it, they were ordered to discontinue their works three months since, and neither company had any right to enter on this piece of land It is, therefore, now entirely a question for the Duke to decide, whether those who have spent their capital and made a valuable discovery are not in "justice" entitled to reap the reward of their outlay and labour? and not those who, making an unfounded claim, consistently refused to spend any money upon it.

"Justice's" statement, that where Old Russell spent 1000*l.* South Bedford has spent 5000*l.*, is also alike absurd and incorrect. On the ungranted land Wheal Russell has spent its 1000*l.*, and South Bedford *nil*. On the Duke of Bedford's property, the Wheal Russell Company has spent many times the outlay the South Bedford Company has on that part of its limits which belongs to his Grace. The Wheal Russell Company is also represented by its original shareholders, while of South Bedford a large proportion have very recently become shareholders.

RIGHT.

OLD WHEAL RUSSELL, AND SOUTH BEDFORD MINES.

SIR,—Paragraphs have from time to time appeared in your Journal announcing a fine discovery of ore in Old Wheal Russell, and there is one to the same effect in your issue of Saturday last. I have been expecting that these statements would have received an official contradiction from someone connected with the South Bedford Mine, and the simple facts of the case stated. As such has not been the case, will you allow an old shareholder, who has spent a good deal of money in calls, a small space to enable him to do so. Some eighteen months or two years ago an agreement was made between the shareholders of East Gunnislake and South Bedford Mines and those of the Old Wheal Russell, by which the latter were allowed to take up an old adit on the Inpham lode, which runs from the South Bedford sett into Old Wheal Russell, and that they should have all the ore discovered in the end, and also for 5 fms. above and 5 fms. below the adit. Soon after commencing operations they had a fine orey lode, which in 30 fms. driving improved to a course of rich ore, worth, I am told, 7 or 8 tons per fm. There is still 30 fms. of ground to be driven before the Wheal Russell adventurers reach their boundary.

The local agents of his Grace the Duke of Bedford were, I believe, fully aware of this agreement between the two companies, and during the whole time this adit was driving the end was, I am informed, periodically inspected by his Grace's mineral agent, so that for twelve months the compact between the two companies was tacitly agreed to by them, nor at any time was there any objection made to it, till suddenly the Old Wheal Russell adventurers had notice to suspend operations by his Grace the Duke of Bedford, or what comes to the same thing, his agent or steward.

It appears that in drawing the lease of South Bedford Mine a rivulet was given as the southern boundary of the sett, whereas on the map on the first skin of the deed the boundary was made to be a hedge, and which hedge is the northern boundary of Old Wheal Russell. Between this boundary and the rivulet the fine discovery was made. We have expended nearly 20,000*l.* on his Grace's property without having as yet a farthing in return, and I should hope that neither his Grace the Duke of Bedford or his advisers will take any undue advantage of what appears to be a clerical error in drawing our lease, but that the error will be corrected, and our rights acceded to us, without any further delay.

AN OLD SHAREHOLDER.

FRONTINO AND BOLIVIA (SOUTH AMERICAN) GOLD MINING COMPANY.

SIR,—According to a notice which appeared in last week's Journal, the disorganisation at the mines is equalled only by the unsatisfactory and costly proceedings of those whom one of your correspondents has designated, I suppose ironically, "the shareholders' trustees." The notice to which I refer states that "private advices" were received by the last mail, stating that serious "disaffection existed at the mines, that the miners had laid claim to the gold in compensation for their unpaid wages, and that (which is really a very serious matter) the authority of Mr. Rouch, the superintendent, was openly disputed."

It would be difficult to cram into three short lines three more disquieting statements, as affecting the future of this (at least, up to the present time) ill-fated concern; but what has induced me more particularly to revert to your notice of this concern is the fact that you state the advices to have been of a "private" character. Although probably want of space was the ruling cause for the publication of a paragraph so painfully terse as that which you published last week, yet I cannot help thinking that, as the representative of the only medium through which shareholders in this and similar companies can obtain information, when such disquieting statements are published the grounds upon which they are based should be in some way indicated. Are the shareholders to infer from your paragraph that each successive mail brings advices to parties other than those officially connected with the company, or that the directors receive advices of a character too "private" for publication? If the former, the shareholders have a just cause of complaint against their "thousand a year" directors; and if the latter, why then the shareholders have a much greater cause of complaint.

But there can be no question that, like myself, other shareholders have put to themselves this very natural question—If "private advices" of this very serious import were received, did not similar facts come to the knowledge of the directors by the same mail? And if such were the case, upon what ground were they withheld from the shareholders? I know it cannot be alleged that there was anything like trafficking in the shares, for the very reason that there is no market for them, and therefore operations in the 50,000, if any took place, must have been a matter of private arrangement.

It must certainly be the duty of the directors to submit to their proprietary such facts as come within their knowledge, not only in connection with the progress at the mines, but also any that may have reference to the efficiency and organisation (or otherwise) of the staff; for it must be admitted on all hands that, however valuable a property may be, unless its development is conducted by a properly organised and disciplined staff, the result to the shareholders cannot fail to be anything but satisfactory.

In introducing the notice of a call of 2*s.* 6*d.* per share, making the amount called up 32*s.* 6*d.* of the 2*l.*, the directors took the opportunity of expressing their continued confidence in the value of the mines, and more particularly Bolivia. It would be most unjust even to infer that such statements were put forth to encourage shareholders to readily respond to the call, but there is the fact before us that when unsatisfactory advices are received (if such is the case) the shareholders are not so readily informed of the fact. Upon what ground, I ask, do the directors withhold the information?—*Jan.* 7. X. Y. Z.

SLATE QUARRY MEETINGS.

SIR,—Either utter incompetence, or a desire to keep shareholders from knowing the real state of the concern in which their money is embarked, is often shown by the managers of slate companies in the reports prepared for meetings, to a degree that is fairly astounding. Taking one glaring instance, they almost universally give the make of slates by count—so many thousands, without mentioning weight and value. I am resolved, so far as I can, to put a stop to this practice, by naming every report appearing in the Journal thus marked by ignorance. In last week's Journal the engineer of the Llanberis Slate Company (passing over much in the report telling a plain tale to any practical quarryman) reports that "they turned out nearly 60,000 slates for November." What would the shareholders in a railway think of a statement that 60,000 current coins had been received for traffic in November, without saying whether the said coins were pence or sovereigns? Yet this is exactly a parallel case. A "seconds small lady" and a "best queen" each count for one slate, but differ in value almost as a penny and a sovereign; and no more idea what has been the real make of slate can be given without stating tonnage and value, than can be given of an amount in money by numbering the coins without naming the exact sum.

I know that in this instance Mr. Emerson has merely done like many before him; but, as I have said, I mean from this time to notice every similar occurrence, for a great mischief is sometimes caused to really sound enterprises by not giving the particulars in a practical manner. I wonder that the shareholders in many cases accept, without remonstrance, the reports laid before them; but in future, if no one at slate meetings insists on the make being stated in tonnage and value, I shall instruct your readers what the count, without any further particulars, really means.—*Jan.* 5. A MAN OF EXPERIENCE.

Royal School of Mines.

MR. WARINGTON SMYTH'S LECTURES ON MINING.

LECTURE XX.—Having now taken a review of the various modes of breaking ground, the next question was the most desirable method of paying the men for the work they accomplish. So large a proportion of the cost of mining depends on the payments for labour, that it is the most important item for consideration in mining economy. The simple way of payment, as in ordinary labour, by the day has been proved to be unsatisfactory in mining. The men being employed underground, where there cannot be any real supervision, it is found that the proper amount of labour is not done for the money. In Cornwall this is so well understood that those men who work at so much per diem are called "owner's account-men," and are looked on with a little contempt by the other miners. There is no doubt, in mining, the best mode of payment is that which is measured by the work done; and as the men have greater opportunities for observation with respect to the changes and prospects of a lode or seam, that faculty, as well as their industry, is stimulated. Nevertheless, we cannot always get away from paying by the day, and this especially where the work is not established, where the ground is doubtful and interruptions take place, and where, in consequence, it would be scarcely fair to the men to make a bargain the conditions of which might alter from day to day. Again, the labourers in the mine, whose occupation is merely to assist the miners, are paid by the day. Those who do the "tramming" are sometimes paid in this way, as well as the carpenters, smiths, and enginemen; but the greater part of these classes of workmen are better paid by the bargain, if the terms can be properly arranged. With a view to a thorough comprehension of this subject, Mr. Smyth thought it well to point out that while in collieries one class of workmen would be employed, a different class of men would come into play in metalliferous mines. The different classes were as follow:—

COLLIERIES.		METALLIFEROUS MINES.
Chief viewer	corresponds with ..	Inspecting captain and manager.
Resident or under viewer and overmen	" " "	Chief resident captain and sub-captains; grass captain, who has charge of surface arrangements.
Deputy overmen	nearly parallel with	Pitmen or shaftmen.
Waste men—whose duties are most important in fiery mines	" "	Timbermen—who put up the supports to the roof and sides.
Fireman—his duty is to go round to all the workings before the men, to see that all is safe	" "	No equivalent.
Hewers—the actual working miners, who cut the ground	" "	Tributers and tutworkmen.
Putters and drivers	" "	Trammers.
On-setters or hangers-on	" "	Fillers.
Doorkeepers or trappers	" "	Not needed.
At the surface—		
Banksmen	" "	Landers.
Screeners	" "	Dressers.
Smiths and carpenters	" "	Smiths and carpenters.
Enginemen	" "	Enginemen.

It will be seen that, although there is a general resemblance, the practical differences are so great that no rules of payment would be applicable to both, although the principles on which such rules are based may be the same. The principal officers in both cases are paid by the day, or month, or year; but the hewers and putters should be paid according to what they effect. Sometimes, as in a certain mine in Ireland, men are paid by the day, and have to bore so many holes for their day's work; but it is difficult for the overseer in every case to see whether the holes are bored or not. This plan, therefore, is not desirable, unless where the overseer can get readily at the work, and see that the holes are properly placed, and bored to the requisite depth. In some hard rock quarries in Wales the borers are paid so much an inch when the ground is extremely stiff, and large charges are to be used—and the overseer goes round at stated times, and gauges the holes; but in underground working, where the men are scattered all over the place, such a plan would require almost as many superintendents as there are men. In metalliferous mines there are various kinds of work, the nature of each being pretty well represented by their names. Sometimes the works are let on a long bargain, a very wide sort of contract, by which the whole or a large part of a mine is let to a company of men called tributers, to do the best they can for a considerable period, and sometimes for a twelvemonth perhaps. This was done in lead mines, but it is considered to have had such mischievous results, that now in most leases there is a covenant inserted not to sub-let without the consent of the landlord. It was a sort of arrangement which exposed the workmen to the temptation of scratching out every bit of ore, and ruining that part of the mine. All bargains, therefore, should be limited by such conditions as will enable the master to direct the general features of the mine, bringing to bear on definite portions of the works such regulations as will keep the energies and interests of the men in subordination to that great object. He now passed on to what were called "tutwork" bargains, from "todt-work," or dead work, which relates to the preliminary operations in a mine, and when what is produced does not pay largely. Some times the bargain is by the fathom, and is called in the North "fathom-tale." The men take a piece of ground through which a shaft is to pass or a level to be driven and arrange for the work to be done in a certain time for a certain sum. Generally speaking, the bargain is for the work to be paid for every month or two months; though in some cases the payment is delayed for a longer period, which is not so well either for the men or the masters: at the same time, too frequent payments are objectionable. If, for instance, the pay should be weekly, a great deal of time would be lost in the actual routine of the pay, and the men would lose much time in holiday making and in their marketing. On the whole, therefore, the fortnightly system is found to be the shortest time at which it is advisable to pay: and this is a practice frequently adopted in the coal districts, while in metalliferous mines the period is usually either one month or two. In some cases lump-bargains are made, by which the men sink a certain distance for a set price. In all these bargains there are certain circumstances which should be looked to in determining the terms on which the work is to be performed:—1. There is the dimension of the level or shaft.—2. The hardness of the rock.—3. The degree of jointiness, or divisional planes, running through it.—4. Whether the ground is wet or dry, for if it be excessively wet, or what is called vughy, open, or cross-course ground, the men will want a long price.—5. The scale of expenses in the district, whether for a fair day's wage you can get a fair day's work, the provision of house accommodation, the rate of rent, and if there be men available in the district.—6. The depth from the surface, and the degree of ventilation; and, coupled with the depth, is whether the men have to climb to and from their work, or are hoisted and lowered by machinery; and as, moreover, with the depth comes an increase of temperature, and, frequently, insufficient ventilation, all of which are circumstances which interfere with the amount of work a man will be able to do.—7. The nearness or remoteness of the miners' dwellings, as, of course, those who have to expend much muscular force in walking to their labour, must be expected to do a less amount of work.—Lastly, whether the men are to carry out additional work beyond that of driving the level, as sometimes removing the material is included, as well as getting it down, in which case the workman hires labourers to help him. It is usual for the owner to find powder, safety-fuse, tools, &c., to be accounted for out of the round sum for which the bargain is made, and sometimes a deduction is agreed upon for the doctor's fund, the club fund, and other like provisions for sickness, accidents, and occasionally for the education of the children. These matters are differently managed in different countries and districts. In Saxony, where the mining is in the hands of the Government, the arrangements are carried out with a great degree of care for the welfare of the men; but here they are usually left to the masters and men to make their own arrangements, although the several Royal Commissions and Parliamentary Committees which have enquired into mining have included them in the subjects of their enquiry. When, however, the terms are agreed upon, and the men are at work, close inspection is needed from time to time to see that the horizontal direction of the level is not departed from. There is a great tendency in certain sorts of ground to rise too rapidly, and a great deal of grumbling will be saved if it be prevented early, so that the men may not have much floor to take up. Another point is to see that the true dimensions are maintained, as so many feet high and wide—and a third important point is to keep in view the real vein on which you are driving. The miners have a tendency to turn aside and follow the easiest ground to them. In some districts the custom was to let out the work by a public auction or setting, which has the advantage of having everything above-board. The men are made acquainted with the ground to be worked, and competition is invited, and thrown open, not only to those already employed, but to any other workmen who may wish to compete. The agent, of course, has inspected the place beforehand, and made himself well acquainted with the nature of the ground to be worked. The bidders do the same, and when they assemble a sort of Dutch auction ensues. One man offers to take the work at (say) 12*l.* per ton, another 10*l.*, and so on, until the agent thinks a fair price is offered, when he throws down a pebble, and the bargain is made. The men who make these bargains often arrange with three or five others to join them, and the system is considered so fair to both sides that it seldom happens that work is undertaken in which the bargain is not fairly and fully carried out. The very uncertainty which attends the work seems to give it an attraction in the eyes of the men. Thus, a party may have arranged to be paid 9*l.*, and after driving a little way may find the ground become so much softer that they might have been taken advantageously at 6*l.* In such cases the men either take it quietly for the rest of their time, gaining mere ordinary wages, or they work vigorously and make a great deal of money. But the ground is also subject to go against them, and then they have to work very hard, and are very much pushed to "make wages," as a fair earning is called. They, however, go cheerfully on, trusting that the agent, finding that the ground is really so much worse than was anticipated, will make it right in the next month by giving them some advantage. A good deal of the probability of "making wages" being thus in the workmen's own hands, they look very narrowly and with great care to the physical conditions presented by the mine, and consider all the probabilities likely to come into play during the time for which the bargain is made. It is often a good plan in sinking a winze to let the men have it a lump bargain at such a price, as in Hungary and elsewhere, with a condition that if the work be done before a certain time they will also receive a bonus; but if not, that they shall lose so much of the payment otherwise due to them. Of course, generally cases the nature of the ground ought to be pretty well known. In another sort of bargain the payment is made according to the weight of the ground which is worked—a method suitable where all the mineral is useful, as in seams of coal. In metalliferous veins, where a great quantity of material is useless, the system is not often applicable; where it is fairly applicable it is usual to have weighing machines; and although it is sometimes the practice to take a tram or a wagon each to weigh so much, it is better to have the weighing machine so arranged that each may be run at landing over the plate, and thus in a rapid manner to weigh every one; also, if the men be numerous, it is not unreasonable that they should nominate a check weigher, to stand there and see that everything is fairly put down. On the other hand, the man who weighs for the owner should be careful to see that the wagons are duly filled, and with proper coal, as the colliers are very fond of shovelling in a quantity of slack, or dirt, in which case it would be their duty to reject the wagons so misfilled. Another mode of paying colliers is that pursued under some varieties of the long wall system, in which several different classes of men come into play at the same places. The hewers do nothing but undercut or hole it for so many yards in length; then a fresh set come in who get the coal down by wedges or gunpowder; then a third set load the wagons, and convey the coal to the shaft; while a fourth set, working by night, have to repair the roads and set the timber props, and lay down tram-plates or rails in the direction of any new place of work. These men are all paid in different ways and at different rates. In metalliferous mines the system of "tribute," by which the men are paid so much out of every pound's worth of ore they raise, is often found very advantageous. In this system, when the lodes are irregular, men will often speculate as to the probability of finding a nest or a course of ore by certain appearances for which they have a fancy; and long practical experience enables many of them to prognosticate truly, even when there is very little visible at the outside to guide an ordinary observer. In this way they sometimes realise large sums; but when their judgment has been wrong, and the bargain is against them, they are usually found to fulfil it honourably to the smallest trifle. In the ordinary run of copper mines, and in many of those of lead and silver, this system has been productive of the greatest advantage.

LECTURE XXI.—Amongst the preparations necessary before commencing what are usually called "mining operations," with a view to future economical management, open workings must be considered. Of these, the whole of the operations are open to the sky, and they are then designated "quarrying;" but, in truth, there is so gradual a transition from quarrying to mining, that it is difficult to draw the line of demarcation, and lawsuits have frequently turned upon the interpretation to be given to both terms in leases and other documents. The general commencement of open workings is the removal of the superficial material—the vegetable soil or drift which forms the surface, and then the removal of the overburden, or, as it is called, "the top." This is sometimes a work of enormous magnitude, and must be dependent upon the expense and facility of carrying it out, and the results expected to follow. The outcrop of many stratified minerals is worked in this way, as certain seams of coal and ironstone and the irregular masses of calamine in Belgium and the North of Spain, where a large area is uncovered, and worked in steps. And so in the older metalliferous deposits the lodes may be uncovered to certain depths, as in the lead mines of Derbyshire. The materials generally won from open workings are various kinds of building stone, millstone grit, salt, peat, &c., and in each case the miner has to consider, probably, a different means of getting that which he requires. In all cases, however, the first work is the removal of the overburden, which is generally performed by ordinary labourers, although it requires a knowledge of engineering to carry it out with due economy. In South Wales, the system called "patching" was a cheap way of getting at ironstone ore, if they had to deal with a hill side containing a band of that mineral, and covered with no great amount of "top." A great deal will, of course, depend upon the dip of the ore, as if it dips into the hill, the expense will be greatly increased, and it may be better to run an adit, as otherwise the water will constantly accumulate on the face of the workings. When the top consists of valuable agricultural ground, it must be removed to a point from which it may be most easily replaced, when, the mineral having been obtained, the space is filled up as the work goes on. Care should also be taken to arrange the roads from the surface to the bottom, whether there be a steam-engine used or not. As a rule, it is not safe to carry on with a great amount of face. In the case of a mine at Stanton, in Derbyshire (drawing exhibited), the workings have as much as 63 feet of height of face, and vast quantities being thrown down, the ironstone is picked out, and stacked up, until it is convenient to remove it to where it is to be smelted; the rubbish left behind is thrown back, and roughly levelled, and thus the ground advances continually towards the face of the work, and, the vegetable earth being spread over it, the land is left in a state fit for the resumption of agricultural operations. Another kind of open air work is that of streaming, which is, on a small scale, something like a quarry. In this case, the bed of a stream is dug out to the depth of a few feet, and, being washed, the tin, the gold, or the diamonds, as the case may be, will be secured, and the rubbish stowed or washed away. But if these superficial deposits of auriferous sand and gravel occur to any large extent, as in Australia and in other countries, to a thickness of (say) 30, 40, 50, or even 200 or 300 feet, it is requisite to lay out the workings with careful consideration, so as not to lose any of the valuable deposit. The most remarkable of these stream-works in this country are those at Pentnan, in Cornwall, where a succession of steps are formed in the superficial gravel which lies over the tin ore sought for. The bottom, or what is called the shelf, is composed of killas, with occasional dykes of elvan, and over this the steps are formed, so that a number of men can be working simultaneously on each. Having explained these steps by drawings, and also shown that, as in many cases works of this kind were often carried for many feet below the streams of the district, it was necessary to have a drain or culvert made of stone, and carried to some point where it could be got rid of either naturally or artificially, the lecturer remarked that sooner or later quarry work came to a point at which it was a question whether it would not be cheaper to give up the removal of the overburden, and carry on works underground. This has been frequently the case with building stone and ironstone; and no finer example could be afforded than the works adjoining Box Tunnel, where Bath stone is obtained upon a system similar to the pillar and stall work of collieries. Abroad the system of working quarries by steps was extensively practised in France, Hungary, and the South of Europe, and near Pesth enormous blocks of stone were obtained in this way; but in this country the most notable examples of such workings on a large scale were the slate quarries in Cornwall and Wales. In all these works it was extremely important that a good system should be laid down from the first, as otherwise the most serious losses might be sustained. There were cases in North Wales where, for want of proper plans at the outset, adventurers had crippled themselves for many years before reaching the best material. The quarries in the Cambrian rocks of Wales were carried on with very little reference to the line of the beds, but chiefly with regard to the cleavage. In the case of building stone they would look how the bands overlaid each other, and work accordingly; but in North Wales it was different. The slabs of slate ranged from a moderate inclination to a position nearly vertical, and it was worked parallel to those faces rather than parallel to the beds. The quality of these slates varies very much: sometimes there are beds hundreds of feet thick, resembling good slate, which is not so really; and where it does not look very useful to the inexperienced eye it may prove to be of an excellent quality. This is a matter of the greatest importance, as there are whole mountains of slaty rock which contain little beyond a kind of slate commercially very doubtful indeed. Having, however, surmounted these difficulties, and fixed on a suitable place for the quarry, the position of the planes of cleavage becomes of importance, as it is this which will regulate the form of the quarry. This was illustrated by a description of the quarries at Festiniog, in Merionethshire, which produced a blue slate, famous for splitting so thin and evenly. One of the accessories to it was a tunnel through the hill, by which means the water was got rid of. The slate, which dips downward, is covered with a mass of valueless slatey rock and a kind of greenstone, and up to a certain point this was removed. After awhile this was found to be impossible, and then parallel openings were driven into the rock, and a good portion is worked out by means of underground chambers. This plan, however, is not so advantageous as open air workings, as the ground cannot be excavated with the same economy, and it is necessary to break up the slate blocks into smaller and shorter pieces. Where the cleavage of the slate is vertical great care must be used, or the danger to the workmen will be very great. The quarries are often, therefore, carried down more than 200 feet, and in such cases there is a constant tendency in the slate to exfoliate, and break away in great masses. This is avoided at the Penrhyn Quarries, near Bangor, and elsewhere, where the rock is cut away in steps. At Penrhyn there are 12 or 14 of those steps, wide enough to allow between 3000 and 4000 men to work at one time. In beginning a quarry, if it be on a hill side, where workable slate is to be met with, it is desirable to get the steps into a semi-circular form, or at any rate in several different directions, so as to allow of the employment of a great number of men at the same time, and to admit of the overtop being got rid of in the easiest and most economical manner. The lecturer then, by means of drawings, explained the proper arrangement of steps, so as to allow of the best disposal of the rubbish, and the most convenient mode of conveying the slate out of the quarry. It was necessary these steps should not be too high, as a fall from any considerable height would damage the slate; and with a view to avoiding this danger, the steps in a French slate quarry, at Angers, were seldom more than 10 feet English in height. Slate quarrying was a most interesting subject from the number of men it employed, there being in North Wales alone from 10,000 to 12,000, all getting good wages. They were a most respectable set of men, and well satisfied with their lot. They were paid on a system of bargains, at so much per thousand or per ton for all they get, and thus have

an interest in getting out as much saleable slate as possible. In conclusion, he must add a few words upon another class of workings for metalliferous deposits, where open workings come into play. It was simple and rude, and belonged to the earlier periods of mining, and had not the same regularity as now prevailed. It was, in fact, merely the tentative process of opening a large hole, and following up the deposits. A good example was that of Carclaze, an ancient tin mine, which exhibited one of these openings, excavated by means of an adit. On the Continent there were many examples—at Fahlun, north of Stockholm, Dannemora, &c., some of which were from 200 to 300 ft. deep in mineral deposit, which has been removed bodily. This has been the history of many large deposits. In Anglesea, in the Parys Mountain Copper Mines, a case analogous to that of Fahlun, this system was worked successfully as late as in the last century. It was accompanied by frightful-looking fissures, and seemed as though, if the supports were removed, it would fall in bodily; and, indeed, it could not beyond a certain point be worked so safely as by shafts and galleries under cover. Beyond this he need scarcely detain the students further on the subject of open workings. It was very important to recollect that there is a limit beyond which such workings cannot be carried on with safety. That limit depends much upon the hardness of the material; and even when in hard slate, when several hundred feet down, there is a constant risk of fall, which ought to engage the attention of everyone concerned in the direction of such works. It must also be remembered in considering such cases that it is difficult to manage the ventilation satisfactorily if it is found necessary to continue the works under cover. One special point to be attended to is the removal for good of all the refuse material. Nothing shows the necessity of care more than the fact (in addition to the sources of risk and danger pointed out) that we may get on the top or side of a hill and find a mountain of debris piled up where the next movement of excavation should be made; and even if we escape the work being hindered for many months, a quarry which otherwise may be in a satisfactory condition will yield no sufficient results.

LONDON ASSOCIATION OF FOREMEN ENGINEERS.

The fourteenth annual meeting of members of this institution took place on Jan. 5. The sitting was devoted to the election of six new members, the reception of the auditors' report, the delivery of the President's annual address, and the election of officers for the year 1867. We subjoin an extract from Mr. Newton's address, while, we may add, the details of the balance-sheet show that the society is prosperous, from a financial point of view at least:—"One gentleman, I may tell you, who although not a member of this association, yet evinces great interest in its welfare, and who recently read a valuable paper before you—Mr. G. F. Ansell,—has promised to bring the whole subject of the Physical Properties of Gases under your notice at an early period, provided you are disposed to accept of his services. The study he has brought to bear upon the various and subtle fluids included in the term gases, his lucid method of imparting the knowledge he has gained, and the importance to engineers of an acquaintance with the laws that govern their action, all combine to make them, as I think, an acceptable item in our programme for the new year. The occurrence of the fearful explosions in the Barnsley and Staffordshire pits since Mr. Ansell lectured, in November last, on his Fire-Damp Indicator, has created intense interest in mining matters, and made those mysterious agents of death—carburetted hydrogen, carbonic acid, and choke-damp—familiar to us by name as household words. It is essential, too, that their natures and properties should be understood. Without wishing to resuscitate the question of "Mining Accidents, and the means of preventing them" on this occasion, I must reiterate my heartfelt wish that out of the calamities which have fallen with such fatal force upon English colliers during the past year ultimate good may arise. It is high time that the scientific and mechanical societies of this kingdom took the subject more earnestly into consideration, and initiated means for warding off—as far as possible by human assistance—such terrible accidents in the future. It is customary for some mine owners, mining engineers, and others connected with the management of affairs underground to assume that those who are engaged only in the upper world neither understand the economy of mining nor have any right to interfere with their especial duties. When, however, it is found that at least a thousand lives are annually sacrificed by casualties in the coal pits and mines of Great Britain, and that 1500 have been lost last year, it surely argues that some supplementary aid is required to diminish the length of these yearly death lists. To my thinking, the Legislature itself is partially responsible for the perpetuation of a system of operations in respect of mining which is attended by such calamitous consequences. Either a select committee of the House of Commons—with more energetic and able members than are sometimes found as constituents of such a body,—a Royal Commission, or a more complete plan of Inspectorship than now obtains, should be forthwith inaugurated, for the purpose of staying the hand of the Destroying Angel who lurks in our mines. It is, I maintain, too, the bounden duty of such institutions as our own to contribute their quota to the good cause. The practically trained minds of engineering foremen are well qualified for studying how to raise from the earth the greatest amount of mineral wealth with the least sacrifice of life and limb, and to propound a satisfactory solution to the problem. Very much depends on mechanical appliances, and the improvement of these constitutes a legitimate branch of study for those who are now my listeners. It is a humiliating fact for an Englishman to learn that other countries are in advance of their own in the direction indicated, and that in France especially large annual rewards are granted to those who are fortunate enough to introduce scientific or mechanical inventions of use in saving life in mines. The system has a two-fold advantage—it tends to mitigate human suffering, and it stimulates inventive genius. Here, on the contrary, the man who, unconnected with mines, devises improvements in the mode of obtaining coal or ore from them, has to encounter discouragements and, perhaps, insult, and whilst his expenses may be large his profits will be *nil*. Let us hope that the time is not distant when all this shall be changed, and when, as in other things, justice and common sense shall triumph over injustice and prejudice—truth over falsehood. I cannot refrain from offering a solemn tribute of admiration to, and regret for, those gallant fellows who after the Barnsley catastrophe nobly imperilled their lives, and unhappily lost them, in the holy attempt to rescue others from death. More truly may it be said of them than of those who perish on the battle-field—unless in defence of their homes—that they fell gloriously. Their families should be provided for at the expense of the State, and monuments recording the details of their courage and their devotion should be raised, to incite emulation in posterity. With a calm determination to do their duty, and to save human life, these men descended into the fatal pit. They knew well the risks they ran, and they looked death steadily in the face. Their nobility of character was of no ordinary type; but one who personally knew the whole of the gallant band yields special honour to Mr. Dymond, the principal owner of the Oaks Colliery. Apart from the distinguished conduct of this gentleman after the occurrence of the first terrific explosion in his pit, an incident may here be related which redounds to his credit. Mr. Dymond's father died a short time prior to the catastrophe, and died intestate. The consequence of this latter fact was that legally the eldest son became the possessor of much additional property. With great generosity of nature, the legal inheritor, however, considered himself morally bound to share equally the newly-acquired property amongst the other members of his family, and he did so. The conduct of Mr. Dymond since the accident is matter for still higher commendation, and, fortunately, he yet lives to receive it, although his escape from the consequences of an explosion which took place while he was assisting in rescuing others was little less than miraculous. The bravery, too, of Mr. Tewart, who served under Mr. Dymond, was eminently to be admired. He perished, unfortunately, and his widow, scantily provided for, may well hope for some special and pecuniary recompense for the loss she has sustained. Mr. Tewart had risen from the ranks, and was distinguished by great practical ability, besides being an amiable and most courageous man. It is gratifying to find that the Relief Funds, for the benefit of the widows, orphans, and relatives generally of those who were killed in the Yorkshire and Staffordshire pits, are being so liberally subscribed to. The fact that in the course of a few weeks nearly 20,000*l.* have been voluntarily contributed by persons in all ranks—from the Queen to the domestic servant—from the Prince to the day labourer—is one of which, as Englishmen, we may all feel justly proud. As has been said, however, strenuous and determined efforts must be made to prevent a recurrence of such calamities in the future, if we wish to avoid the stigma of national disgrace. If I have dwelt at some length on this painful theme, it is because my feelings have been strongly excited in regard to it, and because I believe that the whole subject of mining in this country demands far more attention and much more exact investigation than it has heretofore received. The connection between the collier and the engineer is a very close one, as we all know, and without the aid of the one the other would be of little account. Coal and iron are, indeed, literally and morally the bases of Great Britain's prosperity, and the workers in both should possess mutual sympathies."

Mr. Newton was unanimously re-elected President; Mr. Keyte, Vice-president; and Messrs. Sanson, Edmonds, and Irvine, committeemen; and the Anniversary Festival of the Association was fixed for February 16.

INSTITUTION OF CIVIL ENGINEERS.—At the meeting of members, on Tuesday (Mr. C. H. Gregory, Vice-President, in the chair), six candidates were balloted for, and declared duly elected, including five members:—Mr. John Clark, engineer to Municipal Council of Shanghae; Mr. Lewis Henry Moorsom, resident engineer in charge of works at the London-road Station, Manchester, of the London and North-Western, and Manchester, Sheffield, and Lincolnshire Railway companies; Mr. James Long Parker, executive engineer of the 1st grade in the service of the Government of India, Meerut; Mr. Charles Sacré, chief engineer to the Manchester, Sheffield, and Lincolnshire Railway Company; and Mr. Edwin Thomas, engineer to the Regent's Canal Company; and one associate—Mr. Adam Fettiplace Blandy, resident engineer, Millwall Docks.

CHEMICAL PRODUCTS CONNECTED WITH MINING.

Antimony—Regulus	ton	£34	10	0	Cop. sulphate, 1st qual.	cwt.	£ 1	6	0
English bowl	cwt.	1	14	0	Seconds	cwt.	0	14	0
French star	cwt.	1	14	6	Copperas—Green	ton	2	17	6
Arsenic—White lump	cwt.	0	15	6	White, foreign	ton	12	0	0
White powdered	cwt.	0	7	0	Litharge—Flake	ton	22	0	0
Barytes—Carbonate	cwt.	0	4	6	Ground	ton	22	10	0
Nitrate	cwt.	1	15	0	Manganese—Lump	ton	6	10	0
Sulphate	cwt.	0	4	0	Powdered	ton	8	5	0
Bismuth	lb.	0	12	6	Pyrites (45 per cent.)	cwt.	2	0	0
Brimstone—Seconds	ton	6	17	6	Strontian—Carbonate	cwt.	0	12	0
Refined	ton	10	10	0	Nitrate	cwt.	2	11	0
Sulphur, flowers	cwt.	0	12	6	Venetian red	cwt.	0	6	0
Ditto, vivum	cwt.	0	8	0	Zinc—Oxide	ton	26	0	0
Cobalt—Black oxide	lb.	0	16	0	Sulphate	ton	14	0	0

CHEMICAL PRODUCTS CONNECTED WITH MINING.—Reviewing the movements of the trade for the year just past, Mr. W. Caudery (Jan. 1) writes:—The trade in Quicksilver throughout has been equal to that of former years. During the first four months it was nominally quoted at 8*l.* per bottle, with business done at 5*s.* less; at the end of April, however, the price was reduced to 7*l.*, at which it has since remained, but with occasional sales at 6*l.* 17*s.* 6*d.* Although there has been a large trade in Sulphate of Copper throughout the year, the value has gradually fallen. In Jan. it was 32*s.*; in Dec., 25*s.* to 26*s.*—present prices. The rough market also in the same way declined, best selected having been 80*s.* early in Dec.—the lowest price known for the last 20 years; but on the 24th of the same month an advance of 5*l.* per ton was established. Very little change occurred in Arsenic; the demand has been very limited. Lump opened at 12*s.*, and gradually advanced to 15*s.* in May, at which it remains. Powdered opened at 5*s.* 9*d.*, and, in unison with lump, advanced in May to 6*s.* 6*d.*—present price. Green Copperas did not vary in price to any extent, ruling from 55*s.* to 65*s.*; according to quality, with a moderate amount of business. The supplies of brimstone during the year being good, and fully equal to a fair average demand; prices, which commenced at 8*l.* 5*s.* for best seconds, fell to 6*l.* 10*s.* towards September. In December an advance of 5*s.* left the closing value 6*l.* 15*s.* per ton. The stock of raw is moderate, and any great fluctuation in price improbable. Refined roll has varied 6*d.* per cwt. only through the year, commencing at 10*s.* 6*d.*, dropping to 10*s.* in Sept., and recovering 3*d.* in Dec., leaving present quotation 10*s.* 3*d.* per cwt. Flowers of sulphur have continued at 12*s.* 3*d.* and 13*s.*, the former being present quotation. Sulphuric Acid continued in active but steady demand at ¾*d.* to 1*d.* per lb., with discount varying according to circumstance.

[ADVERTISEMENTS.]

From Mr. JAMES CROFTS:—The incidents of the market during this week have been of a congratulatory nature, resulting in a large business on the Stock Exchange and Mining Markets, and in the latter in particular, with some special exceptions upwards, there has been no marked change in prices. Those shares which depend for progressive advances upon a further rise in tin and copper (which is more than probable), are eagerly sought for, and it will thus be found by reference to the last Journal (p. 5), that the writer's predictions as to the probable course of prices were perfectly sound. To give instances:—WEST FRANCES, from 14*l.* have risen to 17*l.*; GREAT RETALLACK, from 22*s.* 6*d.* to 35*s.* Some fine specimens of ore from this mine have arrived, which contains, it is said, 30 to 40 ozs. of silver to the ton. EAST LOVELL and GREAT WHEAL VOR are largely dealt in by investors. PRINCE OF WALES shares are advancing in price to 30*s.* at least—sellers shy—the last report being strikingly suggestive of an improvement, which, if it happens as anticipated by the management, may send the shares into the money class of pounds instead of shillings. Decidedly sound operations are taking place in the sale of GREAT LAXEY shares, and the substitution of WEST CHIVERTON, without, however, any great exaggeration in the price of the latter, as they remain steady at 55*l.* 10*s.* to 56*l.* 10*s.*, whilst at 60*l.* per share they would pay 14 per cent. per annum. Capitalists should not neglect this stock, nor any other of the large producing mines, whether of copper, tin, or lead. There has been a marked peculiarity this week in the demand for the class of shares—those mines which were conquered by the crisis, but not entirely subdued, and from being next to unsaleable, although possessing positive vitality, are reappearing as quotable mines. A long list could be given of these perennials, which, however, would serve only to perplex an enquirer; the writer, therefore, in his usual advertisement, on the front page, ventures upon noticing only a few, the merits of which have been thoroughly sifted by him, and many of them will, no doubt, advance in the course of the spring and summer hundreds per cent., although some have already done so.

From Mr. EDWARD COOKE:—The Mining Market continues active, and a large amount of business has been transacted. The advance in the price of copper and tin will have a very beneficial effect on such mines as Great Wheal Vor, Tincroft, North Wheal Crofty, East Lovell, Wheal Basset, West Caradon, Prosper United, Wheal Seton, Devon Great Consols, &c. Some of the above mines have advanced to prices adequate to the advantage derived from the enhanced price of their produce. On the other hand, there is still a large margin for a rise in several mines that have been comparatively neglected by the public. WHEAL BASSET has scarcely ceased to pay regular dividends for the last 20 years, and is one of the best and safest investments in the whole list of mines. At the current price the shares will, in all probability, return 12½ to 15 per cent. per annum. EAST LOVELL shares have not yet responded to the advance in tin, hence they are safe to buy. A short time since a telegram was sent to London stating that the lode had been cut in the 60, and valued at 50*l.* per fathom. The telegram proved to be the work of some malicious party, and also to be incorrect; and, although it was discovered in a few hours to be a false alarm, yet it caused the shares to advance 2*l.*, but, of course, they have receded again. I merely mention this circumstance to show the effect the cutting of the lode in the 60 will have upon the price of the shares when it is really met with. There is everything to indicate East Lovell becoming a very profitable and lasting mine, and the shares should be bought before the rise in price, that is imminent, takes place. The adjoining mine, GREAT EAST LOVELL, is attracting some attention. It may be here stated that every mine agent who has inspected this mineral property has reported most favourably of it, and, among them, Capt. Charles Thomas, of Dolcoath Mine, whose opinion is respected as much as any agent's in Cornwall. There are 3000 shares only. The price is about 20*s.* per share, and, under the most unfavourable circumstances, the calls will not, I believe, exceed 15*s.* per share for 12 months, while, in the meantime, discoveries may be made that will obviate the necessity of calls. As a low price share they are good to buy. Ever since PROSPER UNITED shares were about 20*s.* each I have endeavoured to induce the public to buy them. Having made myself thoroughly acquainted with the merits of this, as I do every other mine I write about, I feel much pleasure in saying that the prospects for the future are of a very high order. Probably, there is no mine in Cornwall whose management reflects greater credit upon an agent than that of Prosper United. He has brought the property from a state of comparative poverty to that of one of the most prosperous and productive mines in Cornwall. Its monthly returns, both of tin and copper, are on a large scale, leaving good profits to the shareholders, many of whom have stuck to their shares from the commencement, and have paid some 8*l.* to 10*l.* per share upon them, and it is not at all improbable they will get a good return for their large outlay. Having dealt in Prosper United to a far greater extent, during the past few weeks, than the whole of my contemporaries together, my friends have had an opportunity of realising the large profits an outlay in mine shares sometimes yield. I consider the position of the mine, and the statement of accounts that will be presented at the next meeting, in February, will convince the shareholders that the dividend of 5*s.* that will be then declared is only the commencement of a long series of them. I am glad to learn that there is great probability of WEST CLIFFORD being set to work. It has always been a source of regret to all who know the splendid position of this property, relative to that of the greatest mines that Cornwall has produced, that it was brought to a standstill upon the eve of almost certain success. Whoever the parties are that contemplate the re-working of West Clifford, they will doubtless reap the benefit of the seed sown by the former company, who failed from the miserable way they set to work—without adequate capital to complete their object. It is very gratifying to learn that a more satisfactory feeling exists among the employers and workers in the Iron Trade. This I am credibly informed is being largely manifested in the very important district of Middlesbro'-on-Tees. The employers, the manufacturers of iron, having been obliged, from circumstances over which they have no control, to reduce the price 20*s.* per ton, it is only a natural consequence that while this low price reigns the producers must submit to some diminution of their wages. I think they have acted wisely in meeting their employers in the spirit they have done in this emergency, and I hope the reduction in the price of iron will conduce to an increased demand for the article. Although iron mines form no part of the business of the Mining Market, still the price of iron may be said to be the barometer of the metal market. When iron is at a high price other metals generally command a high price also. Another, and the most important of all the mining interests of the country, from some cause or other, has either been entirely ignored or utterly neglected by the London Mining Market—viz., coal mining. Some 12 months since I introduced a coal mine to the market, and although the public and my own friends subscribed for the shares liberally, only one member of the Mining Market besides myself identified himself with this concern, which really does not partake of the character of a speculation. I allude to the HOLLYBUSH COLLIERY AND COKE WORKS (Limited). In the transfer of a property from the hands of a private individual to that of a company, it requires some months to obtain the full benefit of a proper amount of capital brought to bear upon a valuable property, as the Hollybush Colliery undoubtedly is. There are 45 coke-ovens erected, with coal discovered that will require several years to exhaust, and a guaranteed dividend for 18 months of 10 per cent. From present appearances, however, I anticipate the profits from this time forward will far exceed the 10 per cent. The shares are 4000 only in number, of 5*l.* each, of which there is 2*l.* 10*s.* paid, and it is not probable that more than 20*s.* more will be required, while the chances are that not even half that amount will ever be called. I consider the shares are a safe and eligible investment, free from the risk attending an outlay in ordinary mines.

NORTH CROFTY shares have been largely dealt in, and have attained a further rise in price. Their having risen so much during the past two months may be supposed by some as a reason for not buying at present price. It must, however, be remembered that mineral property (unlike other securities, such as railways, &c.), is capable of enhancing in intrinsic value to an enormous extent in the course of a month, or even a less time. North Crofty appears destined to become the most important tin mine in its district; and although the shares have risen considerably, I consider it is highly probable they will advance several pounds higher. The cutting of the lode in the 55 fathom level at the PRINCE OF WALES MINE is now looked forward to with considerable interest. At present the indications of its being found productive are exceedingly favourable, and should they be realised those who hold the shares may be considered very fortunate. As an instance of the large profits to be made by an outlay in mines, I may observe that Great Retallack shares a few months since were nominally about 2*s.* 6*d.*, and are now 34*s.* to 36*s.*; Prince of Wales shares within 12 months rose from 1*s.* to about 40*s.*, and are likely to attain the latter price again. GREAT WHEAL VOR is not, I am sorry to say, looking so well as it did. The bottom level has rather disappointed the expectations of the management, and even with a further rise in the price of tin, that is very likely to take place, not more than a quarterly dividend of 5*s.* per share can be expected.

P.S.—Since writing the above, the lode in the 55 at PRINCE OF WALES MINE has been intersected, and so far as cut into shows very favourable indications for a course of ore.

From Mr. JOSEPH DUNSTAN (Truro, Jan. 10):—Much more activity prevails on all sides; the rise in the tin standard, together with the gradual advance in the price of copper, have not been without their beneficial effects. Six months since I repeatedly called the attention of the readers of the Journal to several important mines, which were then sold at wretchedly low prices—for instance, Wheal Bullers were sold at 4 to 4½; North Crofty, 4*s.* to 5*s.*; East Basset, 14 to 15; Cook's Kitchen, 3½ to 4, &c. Several of my friends took my advice and made large purchases, from which they can now realise a nice profit of 200 or 300 per cent., and although many let this opportunity slip, yet there are other mines at the present moment of great promise, and which are still at much below a fair market value. Among those which will have a great rise are the following:—EAST WHEAL SETON: This mine was formerly a part of North Crofty. They have fine stones of copper ore in the adit level, while Seton and West Seton lodes are all coming into this sett, and it is thought this mine will turn out a great trump. WEST ST. IVES has been started by a respectable company of London shareholders. This mine is situated at St. Ives, Cornwall, in, perhaps, one of the richest tin and copper districts in the county. It can be worked at a depth of 60 or 70 fms. below surface without the aid or assistance of machinery. There are several lodes of much promise—in fact, on one lode, where they have had a few men at work, they have discovered some splendid rocks of copper ore, and it is thought they will soon have a parcel for the market.—NEW CLIFFORD: This mine is in the centre of the rich mines of Gwennap. The engine-shaft is being sunk with all possible dispatch, and the cutting of the lode is looked forward to with much interest, seeing Tresavean, Penstruthal, and several other mines of the district made their first rich deposits of ore at this depth. I have often called attention to GREAT RETALLACK, and when shares were freely offered at 3*s.* or 4*s.*, and strongly recommended their purchase: they are now 32*s.* to 34*s.*, and the mine looking remarkably well. GREAT SOUTH CHIVERTON is also looking well in the bottom parts of the mine. It is immediately west of and adjoins West Chiverton: this is a mine where great chances of success are held out. The manager and the secretary are highly respectable, and in whom great reliance may be placed. NORTH CHIVERTON is still in the Vice-Warden's Court, but it is thought that it will soon be purchased and re-worked by a first-rate company. Intending shareholders will do well in getting sound legitimate advice as to the purchase of mining stock.

From Messrs. WARD and JACKMAN:—The improved tone of the market generally is maintained, and the purchasers appear to be people who are buying for permanent investments, thus showing the confidence of the public in the sound and healthy condition of mining undertakings. The standard for copper has risen gradually 10*l.* 17*s.* during the past six weeks, and as this will make about 12*s.* 6*d.* per ton difference to mines returning copper ores, shares have changed hands at advanced rates; yet we believe more business has been done in tin than copper mines, the general opinion being prevalent that the price of tin will go much higher. We subjoin a few extracts from our correspondents. CHIVERTON MOOR: It is stated they will sell 1000*l.* worth of silver-lead this quarter from the ends and winzes, only two men stoping, and there are two or three important points to come off in the course of next month. At EAST CARADON, the reported value of the ends is 50*l.* this week. At WEST CARADON, operations are progressing satisfactorily; they have sampled 133 tons of fair quality copper ore, which will be sold at the end of this month. WEST CHIVERTON is said to be looking as well as ever; the late decline in price was not on account of any falling off at the mine, but simply from market operations. The next dividend will be made on the 17th of February. NORTH CROFTYS have been in especial favour, and have further advanced; the mine is stated to be opening out very favourably; we bought largely in this mine at from 10*s.* to 20*s.*, or 5610*l.* only for the entire mine, when no one would look at it; it is now selling for over 26,000*l.* We have received valuable information respecting some of the "favourites," at present commanding so much attention, and shall be glad to impart the same to our friends, as to publish it would bring down the wrath of the "talent," and having only the interest of our clients in view, it would be best to avoid publicity at this stage. SOUTH BASSET should not be lost sight of at the present low prices; the mine is looking very well, and an improvement may be looked for at any moment, which would cause 100 per cent. rise here.

From Mr. J. J. REYNOLDS (Union-court):—The past week has been characterised by no sensation movement in the price of mining stock, the market generally having been firm, and in some cases advanced. Close observers, however, will have noticed the gradual absorption of stock, which has been offered at almost nominal prices, in cases where the management is undoubted and the locality good. I especially refer to progressive mines, such as North Dolcoath, Redmoor, &c. EAST LOVELLS, at 10½ to 11½, should be bought, the full value of the lodes being 200*l.* per fm., and likely to improve. GREAT VORS close 17½ to 18. LAXEY, 17½ to 18; NORTH ROSKEAR, 5½ to 6. NORTH CROFTY, 4½; of the latter mine I would add that the latest advices received from the neighbourhood only confirm me in my opinion expressed last week, that it will be one of the most remunerative tin mines of 1867; and those who do not purchase at present prices will not long be able to do so, and will have substantial cause of regret in not availing themselves of the present opportunity. PRINCE OF WALES, at present prices, 30*s.* to 32*s.*, are good to buy. The advance of 2¼ in the standard for copper will give a further impetus to business in the coming week; and, taking into consideration the present low prices of mining shares, with the great probabilities of a further rise in the prices of metals, there has been no period during the last ten years which presented such great certainty of profit upon investments of capital in British mining securities.

From Mr. A. E. PRINCE (Cornwall Mining Exchange):—The markets have this week been subject to variations, but as the year advances grow increasingly buoyant. It was generally prognosticated that the tin standard would again be put up this week. Whether the majority of our readers agree with us we dare not say, but our conviction is that greater intervals are preferable, as a rapid succession of rises is subject to reaction. NORTH WHEAL CROFTY, in consequence of its improved condition, is attaining a high standard among our mines. We can but congratulate those gentlemen who, so wisely looking into the future, purchased largely in the concern. We do not hesitate to affirm that North Crofty might at once take a high position on the Dividend List, were it not for the wishes of some large shareholders, whose judgment, based upon practical experience, brought them to the conclusion that for the present sufficient tin only shall be taken away to meet the actual outlay (about 800*l.* per month). Without doing any injustice to the mine, 20 tons of black tin monthly might at once be taken away, and at the present monthly cost. The tin being of good quality, profits would be correspondingly fair. Doubtless when shares are at 10*l.* they will be more eagerly sought for. There are now more buyers than sellers, which is an unmistakable proof of a rising market.

PENHALE AND LOMAX CONSOLIDATED SILVER-LEAD MINING COMPANY.—It appears that the directors do not anticipate any loss will accrue to the company by the misappropriation of its funds by the late secretary (Mr. W. G. Powning); but the audit has been carried far enough to show that the late secretary had carefully concealed from the directors many of the current obligations of the company, and had also from time to time studiously misrepresented various matters—which, as a servant of the company, were necessarily brought before him—in such a manner as completely to deceive the directors. But the principal creditors have accorded their support to the company, and all (with the exception of some to whom trifling amounts only are owing) have agreed that their claims should be liquidated by instalments, payable at four, eight, and twelve months. The works at the mines had been pressed on most rapidly, and with a completeness and attention to the development of a great mine seldom attained in the first year of its existence. The directors unhesitatingly state it as their belief that, with co-operation on the part of the shareholders, and zeal on that of the executive, this property will speedily become a very valuable one. It is very satisfactory to find that the directors' belief in the value of the mines coincides with the opinion universally entertained by those who reside in the neighbourhood of Truro, and who are necessarily well acquainted with the results from the past working of the property. The directors hold between them no less than 2450 shares in the company, and their immediate friends are also large shareholders. The directors entertain a confident hope that the future operations will bring about early and very satisfactory results. The report of Capt. John Kitto states that nearly all the lode above the 65 has been stoped away, consequently no large quantity can be expected therefrom. This, of course, speaks well for the deeper levels, where considerable reserves of new ground yet remain to be opened out, and from which large quantities of lead ore will, undoubtedly, be raised. There are now about 15 tons of ore at surface, and if the operations at the mines can be uninterruptedly carried on this quantity will rapidly increase. Capt. Kitto apprehends that, unless any unforefeen accidents, occur the bottom (the 90) will be reached in about six weeks hence. He estimates the costs during the next three or four months (by which time he hopes to be in a position to commence full operations in opening up new ground, &c.) to be from 220*l.* to 250*l.* per month, including coals and other supplies. This amount does not include any subsists that may be given to tributers on account of any ores they may raise.

PETROLEUM IN ITALY.—Reference to the discovery, by Mr. St. John Fairman, of some important petroleum-bearing lands in Northern Italy was made in the *Mining Journal* of Sept. 8 last, and it is now proposed to establish a preliminary private partnership concern, with a capital of 3000*l.*, in shares of 10*l.* each, one-half (and a royalty of 1-10th of all oil raised in perpetuity) to be paid to Mr. Fairman, for his interest in a freehold property, with three wells upon it, in the Monte Baranzone, in the province of Modena, and the remainder to be applied as working capital. It appears that Mr. Fairman has 15 grants in the provinces of Reggio and Modena, which he agrees to sell to the partnership, if they accept the option within six months, for 25,500*l.*, and one-tenth of the oil raised thereon in perpetuity, on condition that he shall be the managing director for the working in Italy, or shall have some post equivalent thereto, at such remuneration as shall be mutually agreed upon. It is estimated that the re-sale of the property could be effected at 50,000*l.*, which would, after paying commission to the vendor's agent, give a profit of 74*l.* 5*s.* upon each 10*l.* invested by the private partners.

MINERALS IN NEWFOUNDLAND.—Some important discoveries have been made on the northern and western shores of Newfoundland, chiefly through the enterprising exertions of Mr. C. F. Bennett, and about 1700 tons of superior copper ore have been shipped during the past season from his mine at Tilt Cove. But, besides the copper, Mr. Bennett has discovered valuable deposits of coal and petroleum, and marble quarries of great extent and value. He is now making arrangements to quarry the latter on a large scale next year. Samples of the coal exhibited in St. John's resemble that from the Bras d'Or mines of Cape Briton. The marble is of various colours and qualities, and amongst those is the most valuable kind, white statuary marble, in large quantities, specimens of which, forwarded to England, have been pronounced by competent judges to be superior in fineness and colour to the best Carrara.—*Halifax Citizen.*

COPPER ORE FROM THE COLORADO.—A schooner had arrived at San Francisco from the Colorado river, bringing 3514 sacks, or about 210 tons, of copper ore. This is by far the largest shipment of copper ore ever made from that place. The ores generally found are carbonates of copper, which are easily worked, being reduced to commercial purity at one smelting. From the statement made by parties interested in mining in Arizona, we can soon expect continuous shipments of large quantities of copper ore, which will have to be reduced to pure metal before shipment to foreign ports.—*Panama Star.*

THE IRON MILLS OF THE LEHIGH VALLEY.—Lehigh coal is known to be the best anthracite coal found in this country. It may not be generally known how extensively ironworks are springing up along the mines of the Lehigh valley, and that some of those in operation are among the first and best in the country. There are 29 furnaces belonging to the Lehigh group; the 3 Cooper furnaces at Phillipsburgh, and the 2 Durham furnaces in Berks county, are not strictly in the Lehigh valley, but are so close to it as to be classed in the group. These 29 furnaces, many of them very large, constitute the most important group of anthracite furnaces in the country. Their largest product was in the year 1864, when 214,093 nett tons of pig metal were made. To produce this immense amount 486 tons of ore, 273 tons of limestone, and 459,051 tons of coal were consumed. The capital invested in the blast-furnace companies of the valley considerably exceeds $5,000,000.—*Mining and Manufacturing Journal* (Pittsburgh).

CURES OF COUGHS AND COLDS BY DR. LOCOCK'S PULMONIC WAFERS.—From Mr. Wilcox, 7, Prospect-row, Birmingham: "A customer to-day informed me that he had taken them very frequently during the last four years, and also recommend them to others, and had never known them to fail." They give instant relief to asthma, consumption, coughs, and all disorders of the breath and lungs. To singers and public speakers they are invaluable for the voice. Price 1*s.* 1½*d.* per box. By all druggists.

HOLLOWAY'S OINTMENT AND PILLS—JUDICIOUS MANAGEMENT.—Though it is impossible, in this climate of changing temperature, rain, and fog, to prevent ill-health altogether, yet its form and frequency may be much mitigated by the early adoption of remedial measures. When hoarseness, cough, thick-breathing, with the attending slight fever indicate irritation of the throat or chest, Holloway's ointment should be rubbed upon the parts without delay, and his pills should be taken in appropriate doses to promote curative action. No catarrhs or sore throats can resist these remedies. Very intelligible printed directions envelope every package of Holloway's medicaments, which are suited to all ages and conditions, and to every disease to which humanity is liable.

Mining Correspondence.

BRITISH MINES.

BEDOL-AUR.—H. R. Harvey, Jan. 9: The operations in the shaft have been hindered in consequence of the water having got in, through the swallow being stopped up with some clay; the swallow is now clear, and taking all the water easily, and the shaft will be completed very shortly. Some nice lumps of ore were found in the clay. There is no alteration in Jones's pitch; the lead is going north-west into ground that has not yet been tried. Nuttall's pitch, in the bottom of the 70, on the St. Vincent vein, is poor. There is a very kindly lode in Williams's pitch in the bottom of the 70, on the Brynia vein, by the old shaft; it is about 2 ft. wide, composed of spar, clay, a soft white limestone, and lumps of ore, yielding about 15 cwts. per fathom.

BOSWORTHEN AND PENZANCE CONSOLS.—R. Pryor, F. Hosking, Jan. 9: We set the following bargains on Friday last:—Jones's shaft to sink below surface by eight men, at 16*l.* per fathom. The adit level to drive west of Jones's shaft, on Bosworthen lode, by four men, at 1*l.* 10s. per fathom. The adit level to drive west of Harvey's shaft, on this lode, by two men, at 1*l.* 5s. per fathom. The adit level to drive north of Daniel's shaft, on Carn Brea lode, by two men, at 7*l.* per fathom. Our pay and setting went off satisfactorily.

BOTTLE HILL.—Joseph Eddy, Jan. 10: South or Copper Lode: The lode in the 12, west of cross-cut, is about 2½ ft. wide; lode still producing good stamps work. The lode east, in the same level, is about 18 in. wide, producing moderate work for tin, and occasionally good stones of copper ore, for the latter not sufficient to value. In the 24, west of shaft, the ground is still hard; lode split in branches, the branches now producing more copper ore. Judging from the nature of the ground in the end, we may soon expect a change for the better.—Main Lode: This lode is turning out about the same quantity of tin per fathom as it has for some time past. The weather has been rather against our dressing for the last week, but I am happy to say we are now again going on with spirit with both burning and dressing.

BRYN GWIOG.—S. Harper, Jan. 9: In consequence of the great increase of water from the recent heavy falls of snow and rain, our bottom levels are full to within 5 fathoms of the 90 fm. level, so that nothing has been done for the last three or four days. The lode in the 90 east is much the same as last reported on; the same may be said of the said level west, both back and bottom end—2½ tons per fathom. The lode in the 75 west is small, and at present poor. The lode in the winze in the bottom of the said level is 1½ foot wide, worth 1 ton of lead per fathom. The lode in the pitch in bottom of the said level is worth 2½ tons per fathom, and looks well for a further improvement. The pitches in the roof of this level are not looking quite so well at present. The lode in the 75, east of the engine-shaft, on the new lode, is much the same as for some time past, worth 1½ ton per fathom. At Bramwell's shaft, sinking below the 80 yard level, the lode is carrying down very regular, with a good south wall, but the ground at present is very hard for progress, but from the appearance of the ground in the 100 yard level, I hope a change for the better will take place. In the back of the 66 we are opening out north, in order to see if we can meet with another run of lead parallel with Brooks's old run, from which large quantities of lead have be raised. We sell to-morrow 35 tons of lead ore.

BRYN GWYN.—H. Nottingham, Jan. 8: The cross-cut driving west from the south end of the workings south of incline, east of shaft, is without change in the character of the ground and the ground favourable for driving. There is no change in the lower level driving south from incline. The drift in the back of Clark's level is still yielding a little ore, and our progress in following it is better. The sump on the south side, the top of the incline, at the bottom of the shaft, is still showing favourable indications for lead, but as yet it remains unproductive. The tributers in Field's levels have discovered some ore this week, which is promising to be of value; those in the old workings about Clark's level are not getting much ore at present. We sampled yesterday 7 tons of smalls and 6 tons of round ore, to be sold next Thursday.

CAPE CORNWALL.—R. P. Goldsworthy, Jan. 9: Saturday last was our pay and setting day, when we set the following bargains: The 90 fm. level end to drive east from the engine-shaft, by four men and one boy, 15 fms. or cut the granite, at 50s. per fm. The takers will receive 2s. 6d. per fm. as a premium if they drive 15 fms. in six weeks. The 70 east to drive west, by three men, 10 fms. or cut the caunter, at 3*l.* 5s. per fm., and a premium of 1*l.* 10s. if they drive 10 fms. in two months. A pitch in back of the 90 west by two men, at 15s. A pitch in back of the 70 east, by two men, at 15s. A pitch in bottom of the 55 east by two men, at 15s. Leavings from the stamps at 16s.

CARADON CONSOLS.—S. Bennetts, Jan. 8: There has been no lode taken down in the 90 west during the week. In the 90 east the lode is still composed principally of gossan, with good spots of ore in it; this end, however, is not many feet off the cross-course as yet. The 80 west is without alteration. The lode in the winze sinking below the 80 is 2½ feet wide, worth 10*l.* per fathom. The other points of operation are much the same as last reported.

CARDIGAN CONSOLS.—H. Boundy, Jan. 7: At Esgairfraith, since the meeting held in October last, the new engine-shaft has been sunk 4½ fathoms, and I hope by the end of this week to be down deep enough for fork sollar, and be ready to commence the driving, both east and west, of a 10 fm. level. The lode at the shaft throughout the sinking has been of a most promising character, yielding some excellent stones of copper and lead ores, and, judging from its present appearances, I have not the slightest doubt but when this part of the property is thoroughly developed that it will become a great and lasting concern. The adit east of this shaft has been driven 6 fms. through a very strong, promising lode, yielding occasionally splendid stones of yellow copper ore, accompanied with a slight mixture of black and grey copper, presenting a very promising and encouraging appearance. The winze or air-shaft from surface to ventilate this level has been sunk 1 fm. only—we have not been able to procure men to do so. A tramroad has been laid from the new engine-shaft to the crushing-mill, for the purpose of conveying the ores to the same. We have also repaired all the machinery, which is now in good working ord r. What we now want is a rapid development, and success is almost certain to follow.

CRENVER AND WHEAL ABRAHAM UNITED.—W. Kitto, Jan. 9: In the winze sinking below the 70 the lode is 3 ft. wide, producing a little ore for the halvener to dress, not enough to value. In the 80 fm. level end east the lode is 2 ft. wide, with spots of ore; the end will be under the winze in 6 ft. further driving, when we shall rise to communicate to the winze. The lode in the new pitch in the back of the 80 is looking well; the men are getting good wages, at 7*s.* 6*d.* tribute. We shall sample about 130 tons of ore at the end of this month. We have had a great deal of rough weather, and last Sunday the main leat or river on the western part nearly broke into the mine; a large launder was moved out of its place, which carried the water over where the lode was worked away to surface, fortunately it was discovered by the watchman in time before much water went down into the mine. I had a dozen men at work on Monday and yesterday, who put it all to rights again; it cost about 3*l.*

CROWAN AND WENDRON.—R. Reynolds, Jan. 8: The masons have not been able to do much during the past week, in consequence of so much snow and rain: they will begin again to-morrow. The lode in the shaft below the adit is about 1 ft. wide, producing saving work for tin.

CUDDRA.—F. Puckey, A. Cundy, Jan. 9: Walker's shaft is now down about 7 fathoms below the 130, the ground continuing favourable for progress. In the 30, west of Walker's shaft, we have begun to cross-cut the lode, and thus far we have got through the capel, which is about 2 feet wide, and very hard beyond this point. We have this day cut into the lode 1 foot only, which produces splendid work for tin, quite equal to our expectations. We cannot, of course, say anything at present as to the size or full value of this lode, which will require yet a considerable time to penetrate, especially should it turn out as large as in the level above. If the lode, as we cut into it, continues to be of the same value as the foot we now see, it will be the most valuable we have ever had in the mine. The lode in the winze sinking below the 130 is just the same as last reported—spare for sinking, and worth 40*l.* per fathom for its width. The lode in the stope in the west of the above winze is still 9 feet wide, and worth 30*l.* per fathom. In the stope in the bottom of the 90, west of Walker's shaft, the tin part of the lode is 3 feet wide, and worth 10*l.* per fathom.

DALE.—R. Niness, Dec. 20: Replying to your letter respecting the new Pipe vein, there can be no doubt, from the many proofs we have had, that it is connected with the Lum vein; the latter being the principal object the mine was first started for, and which has always been pronounced by the oldest and best miners to be one of the best trials in this district, and from the fact of having proved a new Pipe vein in connection with the Lum vein, must considerably add to its value: but, independent of the new Pipe vein, all the cross veins we passed through in working the old Pipe make in that direction, which must also further add to its value, and can be easily proved, at a comparatively trifling expense, by driving a cross-cut from the old Pipe at the 44, which will give about 30 fms. of backs to the 26 fm. level, and nearly 100 fms. to the adit, provided it takes the same underlie the old Pipe has done, the adit level being the lowest point the Lum vein can be seen at; but, independent of the new Pipe and Lum veins, there is every reasonable probability that other runs of ore ground will be met with before reaching the Pipe and Lum veins with every chance of a good mine being opened out, when a second cross-cut might be easily put out at the bottom of the new shaft, and give about 80 fms. of backs to the 44 fm. level; therefore, taking the whole into consideration, there is nothing to be discouraged at, as the prospects are good, and offer more than ordinary chances of success, in which I have still the greatest confidence..

— R. Niness, Dec. 24: There is not much alteration, except in No. 3 stope, which begins to improve nicely; even now it yields better than it has done for several months.

— R. Niness, Dec. 28: I have, since my report to you of the 20 inst., deliberatly considered the importance of cross-cutting to the new Pipe and Lum veins; and in taking into consideration all the circumstances alluded to therein, I am still more confident of the great success likely to attend such a trial, and would strongly recommend its being carried out. The No. 3 stopes in the new mine have improved, and should they turn out as the present appearances seem to indicate, we shall shortly have sufficient ore from here, with the present returns, to meet the cost of the mine.

— R. Niness, Dec. 31: The improvement in No. 3 stopes, mentioned in my reports of the 20th, the 24th, and 28th, still continues. No other change.

— R. Niness, Jan. 7: No. 3 stopes continue to yield about 25 cwts. to the fm., and look very promising. The other places are rather improving.

DEVON AND CORNWALL UNITED.—Thomas Neill, Jan. 8: George and Charlotte: We have cut a branch in the 24 fm. level cross-cut north, 3 in. wide, producing good stones of ore, and underlying north towards the lode, which is a good indication.—William and Mary: The lode in the 22, west of engine-shaft, is looking very promising, and producing good stones of ore. At the 34 west we are driving by the side of the lode, which will be taken down in a few days. We hope to communicate the winze sinking below the 34 with the 46 fm. level in a few days. The new winze in the bottom of the 34 is looking well.

DEVON WHEAL FRANCIS.—W. Harris, Jan. 10: The ground in the cross-cut (adit level) is favourable for driving, and very highly mineralised; we have quartz, prian, and mundic, intermixed with the killas, and also heads sectionally crossing the end, with green silicate of copper; from the appearance of the ground I fully expect ore when we cut the lode, which is about 10 fms. in advance of the present end, and when we shall have at least 20 fms. of backs; this, I expect, will take about five weeks.

EAST CARADON.—J. Truscott, Jan. 9: Caunter Lode: The 100 east is worth 8*l.* per fm.: the 100 west, 5*l.*; and the 90 east, 16*l.* per fm.—South Lode: The 100 east is poor; the 70 west, 15*l.* per fm.; the 70 east, on south part, stones of ore; and the 70 west, 6*l.* per fm.

EAST CARN BREA.—I. Richards, Jan. 8: Thomas's Engine-shaft—No. 3 Lode: In the 80 east the lode is 1¼ ft. wide, and consists of capel, quartz, fluor-spar, mundic, and copper ore, worth 1 ton per fm. In the 80 west the lode is 2 ft. wide, and worth 2 tons of copper ore per fm. The lode in the 70 east is unproductive. The lode in the 60 east is 1½ foot wide, and worth 2½ tons of copper ore per fm. The lode in Morecombe's rise, in the back of the 60 east, is 1 ft. wide, and consists of quartz, capel, mundic, and a small portion of copper ore. The lode in the 50 east is 1 foot wide, composed of capel, mundic, and a little copper ore.—Buckley's Shaft: In the 60 west, on No. 5 lode, the lode is 1 foot wide, composed of capel, mundic, and a little copper ore.—No. 6 Lode: In the 60 east the lode is 1 foot wide, consisting of quartz, capel, fluor-spar, mundic, and a small portion of copper ore. The lode in the 60 west is 1½ ft. wide, and worth 1 ton of copper ore per fm. The lode in the 50 east is 1½ foot wide, and worth 1½ ton of copper ore per fm. A winze (Job's) is being sunk in the bottom of the 50 east, the lode in which is 2 feet wide, and worth 3 tons of copper ore per fm. The lode in Davey's rise, in the back of the 50 east, is 1 ft. wide, composed of capel, quartz, fluor-spar, and a little copper ore. The lode in the 40 east is 1 foot wide, and yields good stones of copper ore.

EAST PROVIDENCE.—J. Nancarrow, W. White, Jan. 5: At our usual survey to-day, the following work was set:—The plat to cut at the 94, at Boorman's shaft, by eight men and four boys, at 40*l.* per fm., which will be completed this month, and sinking immediately resumed. The 82, to drive east of Boorman's, by six men, at 4*l.* per fm.; end improving in appearance. The 70 to drive east, by four men, at 45*l.* per fm.; lode worth 4*l.* per fathom. The 50 to drive east, by four men, at 5*l.* 10s. per fm.; lode worth 4*l.* per fathom. We have also set twelve pitches, to 28 men, at an average tribute of 10s. 7d. in 1*l.*; these pitches are from the 82, upwards. The Carbona continues to look well, and the mine altogether is improving. We sold on Thursday 4 tons 11 cwts. 0 qrs. 19 lbs. of tin, which realised 230*l.* 4*s.*

EAST ROSEWARNE.—J. James, Jan. 10: We have the kibble working to the 95 fm. level, at King's shaft, and are now opening plat and barrow way. There is but little driven east or west in this level since last reported, and the ends are of about the same value. We shall resume driving in a few days. In the 85 fm. level, west of shaft, the lode is 1 foot wide, a little more promising than for some time past. In the 43 fm. level, east of King's, on the engine lode, the lode is 18 in. wide, improving in appearance, and producing stones of ore. The 43, east of Hallett's, is without change to notice. One of the stopes in the back of the 85 east is being all worked away up to the slide, and the men put to rise to prove the lode over the slide. The stope over this slide, 20 fms. east of the point referred to, is worth 10*l.* per fathom. The stope in the back of the 85, west of King's shaft, is worth 6*l.* per fathom. The stope in the back of the 75, east of King's, is worth 8*l.* per fathom.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 9: The lode in the 95, west of engine-shaft, is 18 in. wide, worth 1¼ ton of ore per fm., and which is letting out an increased quantity of water—a most promising lode indeed. There is no change in the lode in the winze sinking below the 85 west since our last advice, worth 4½ tons of ore per fm. The lode in the 75 east is small. The ground in the 75 cross-cut north is very favourable for driving, but we have not met with any lode or branch lately. The lode in the stope above the 75 west is worth for tin 6*l.* per fm. The lode in the stope below the 65 east is worth for tin 4*l.* 10*s.* per fm.

EAST WHEAL LOVELL.—R. Quentrall, Jan. 9: South Lode: In the shaft below the 40, west of cross-cut, the lode in the eastern end is worth 20*l.* per fm., and in the western end from 25*l.* to 30*l.* per fathom. The stope at the 40 fm. level, 7 fathoms west of shaft, is worth 50*l.* per fathom; and the eastern stope in back of the 40 is worth 40*l.* per fathom. We are opening on three distinct runs of tin at and below the 40 on this lode, separated from each other by patches of granite; therefore, as I have said before, we may have a fathom or two to drive east or west at the 60 cross-cut before we meet with the tin ground.—North Lode: The 45, west of new shaft, is worth 20*l.* per fathom. The stope in back of this level east is worth 30*l.* per fathom, and west it is worth 15*l.* per fathom.—Turnpike Lode: In the 28, east of flat-rod shaft, the lode is 2 ft. wide, producing stamping-work; west the lode is split by a horse of granite. The mine, on the whole, never looked better, the lodes being worth in the aggregate 200*l.* per fathom, with every prospect of continuance.

EAST WHEAL RUSSELL.—J. Goldsworthy, Jan. 9: At Homersham's shaft, sinking below the 140, the ground is easier; the progress is more satisfactory. In the 140, east of Roberts's cross-cut, the lode is 5 feet wide, composed of capel, quartz, prian, mundic, and producing some rich copper ore; a very promising lode, and letting out a large stream of water, which has drained the winze in the bottom of the 130. In the winze sinking below the 130 the lode is 4 ft. wide, composed of capel, quartz, prian, and mundic, and worth from 8*l.* to 10*l.* per fm. In the costeaning department two lodes have been opened upon; the north lode, underlying south, is 2 feet wide, composed of capel, quartz, prian, gossan, &c., embedded in a white clay-slate. The south lode, opened upon for about 2 fms. deep, is 2½ to 3 feet wide, composed of capel, iron, quartz, prian, gossan, &c., embedded in a white clay-slate, underlying north; the two lodes, by their present underlying, will form a junction in about 45 fms. sinking. By present appearances, good results will be realised when these lodes are further developed.

— J. Richards, Jan. 10: Homersham's shaft is in regular course of sinking below the 140, and fair progress is being made.—Homersham's Shaft: In the 140 east, and east of Roberts's cross-cut, the lode is large—5 ft. wide, consisting of quartz, capel, mundic, prian, and some rich copper ore; and is altogether more healthy than for some time past. The water has also increased. In the winze sinking below the 130 east the lode is worth 8*l.* per fm. Two lodes underlying towards each other have been opened upon in the northern portion of the sett, both very promising, containing capel, gossan, iron, quartz, and prian; and, according to their present dip, they will form a junction at a depth of about 50 fms. from surface.

FRANK MILLS.—J. P. Nicholls, J. Cornish, F. Cornish, Jan. 9: The east lode in the 130 north is again opening out, being now 2 ft. wide, and spotted throughout with lead ore—a very kindly end. The west lode in the 130 north will yield 3 cwts. of lead ore per fm. The stopes in the back of this level, on the east lode, are without change. The east lode in the 115 north is small and poor. The west lode in the 115 north is 2½ ft. wide, consisting of quartz, white iron, and good spots of lead ore, but not enough to value. The stopes in the back of this level are yielding ⅓ ton of lead ore per fm. on an average. The west lode in the 100 north is 3½ ft. wide, consisting of quartz, white iron, and interspersed throughout with lead ore, but tight for working. The stopes in the back of this level are without change. The west part of the lode in the 45, north from engine-shaft, will yield 4 cwts. of lead ore per fm. The lode in the south end, driving opposite the latter, is poor. The tribute department is without any alteration worthy of remark. The very severe weather we are now experiencing makes it much against our crushing and dressing operations. The erection of our new engine-house and stack will be completed in four or five days from this time, provided the weather becomes favourable.

FURSDON.—J. Collins, Jan. 10: The 31 east is being driven near 6 ft.; the ground is becoming more favourable for ore and for progress. The 11 east is being driven 8 ft. from the 1st cross-course driven. The lode is yielding good stones of ore, and looking very kindly. The stope in back of the 11 east is yielding its usual quantity of ore per fathom, worth 20*l.* per fathom. The winzemen in bottom of the 11 east have taken down the west end of the winze, and are cutting in north to find the main part of the lode, which is producing good stones of ore. The ground in the rise in back of the 31 west is better for progress than when I wrote last.

FURZE HILL WOOD CONSOLS.—Wm. Doidge, Jan. 8: Since the general meeting, held Dec. 12 last, the 54 east has been driven about 8 fathoms; for the first 4 fathoms of this drivage the lode produced 6*l.* worth of tin per fathom. At this point a small cross-course was intersected, which disordered the lode for 3 fathoms in length; the lode is now getting clear from this influence, showing a gradual improvement in size, and from present appearances will, I think, soon become valuable. This end is a little over 30 fathoms west of Bell shaft, and is driving at a cost of 2*l.* 15*s.* per fathom. The stope in the back of this level, west of the cross-cut, is worth 8*l.* per fathom, and stoping at 2*l.* per fm. With reference to the prosecution of the above end, and the general working of the mine, nothing has occurred to alter my report to the meeting in December. I would, in addition, recommend continuing to clear the adit on No. 1 and the south lode, which will enable the bunch of tin in the bottom of the 20 fm. level to be taken away to advantage, and at the same time further relieve our engine from pumping surface water. There is ground in the back of the 54 which will set at a tribute of 10s. in 1*l.*; this would help to defray the expenses of driving the end, and other work. We have from 3 to 3½ tons of tin now on the floors in course of dressing.

GOTHIC.—Capt. James Lester, Jan. 9: I was unable to travel to Aberystwith on Saturday; the weather here has been dreadful since last Wednesday, when the wheel was stopped by the snow. We had a change of weather on Sunday, and on Monday I paid the monthly cost, and had all the men on the mine employed in removing ice and snow, and by evening the water-wheel was again at work. During the time it was stopped it did not hinder any of the men from working in the 25 fathom level, and the tributers continued breaking away the ore there. The south lode from the 25 cross-cut east is turning away fast towards the main lode to the north, and it continues to yield lead ore. The ground in the 25, driving further south, is without alteration. I have sett the winze to sink on Bennett's lode to four men for 3 fathoms. They will sink by the side of the lode until they are down to that depth, when they will take down the lode of itself. Until the water is out of the mine, and the tributers' stuff is cleared away, I cannot put any men to cut ground at bottom of engine-shaft, to prepare for sinking another level 10 fathoms deeper. Until such time the two men will continue driving on west on Bennett's lode, which at times continues to yield good stones of ore. We yesterday began picking and crushing some of the tributers' lead ore. The lode in the tributers' bargain in back of 30 fathom level was yesterday yielding better than I have yet seen it.

GREAT CARADON.—F. C. Harpur, Jan. 9: Since my last report the different operations of the mine have been pushed on as fast as possible. The ground in the 72 fm. level cross-cut, south of engine-shaft, is a little more easy for driving through than when I last wrote you, and hope to see a further improvement in the ground shortly. Our machinery is all in good working order.

GREAT LAXEY.—J. Barkell, Jan. 1: The main engine shaftmen have been engaged for the past fortnight in cutting a lodge at the 220. We have now commenced driving north in a lode worth for lead and blende 40*l.* per fm. There is no change in the 210 going north; lode still worth from 40*l.* to 50*l.* per fm. The 190, going north, is producing 2½ tons of lead and 4 tons of blende per fm. The 180 is improving; now worth 50*l.* per fathom. The 165 end is at present poor. We expect an improvement as soon as we get out of the influence of the slide which has recently been intersected, and disordered the lode. There is no change to notice in the 155 nor in the 145 north.—South Ground: We have commenced to rise in the roof of the 190 to communicate with the sump coming down from the 165. The lode in the sump is producing 14 tons of copper ore per fathom. The 165, going south, is producing 6 tons of copper ore per fm.—Dumbell's: We are making good progress in sinking Dumbell's shaft below the 110, and the lode is increasing in value as we go down; now worth 60*l.* per fm. The sump sinking below the 110 fm. level is about 25 fathoms south from the shaft, and the lode in the sump is worth 150*l.* per fathom. We are now down in the sump about 12 fathoms, and shall commence driving towards the shaft next week. The 110, going north, is looking better; now worth 80*l.* per fm. There is no change in the 85, going south; the lode is still worth 180*l.* per fm. The lode in the same level, driving north, is looking better than I did a week ago; now worth 30*l.* per fathom. There is a great improvement in the 60, driving north. A fortnight ago the lode in this end was only worth 10*l.* or 12*l.* per fathom, but now it is worth full 60*l.* per fathom.—Glen Roy: After much difficulty we have pumped out the water, and timbered and secured the old shaft which was sunk about 10 fathoms below the adit level; this 10 fm. level has been driven south about 50 fathoms and north about 6 fathoms. For the whole distance driven the lode has a very promising appearance, being about 2 feet wide, and composed chiefly of gossan, peach, and quartz, and in places producing spots of lead and blende. We shall now commence to sink the shaft below the 10 on the course of the lode which underlies east about 2 feet in the fathom, just as the lode does in Great Laxey.

GREAT MONA.—J. Trewin, Jan. 2: The deep adit level has for some time produced good stones of copper, but during the last month an important change has taken place, and some nice stones of lead have been broken. The wheel-case is now complete, and the axle laid thereon; the men have commenced to put the wheel together, and we are expecting to have it at work in about three weeks, when we shall be able to commence at once to raise ore, and shall at the same time continue the sinking.

GREAT NORTH DOWNS.—W. Rich, C. Bawden, Jan. 9: The 70 end, west of Sieggan's, is worth 6*l.* per fathom, and looking very promising. The stopes are looking much the same as usual. Sieggan's shaft, sinking below the 70, is as good as ever—a very fine lode of strong yellow copper ore, worth 50*l.* per fm. We hope to complete the timbering of King's shaft by the end of the week, when we intend to resume the driving of the 86 west towards Sieggan's shaft forthwith. We are urging on the operations at Butler's as fast as possible; the bottom of the shaft is quite dry. The 10 end west, at Brigan new shaft, is poor; we have intersected the north branch, which is unproductive.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Jan. 5: Setting Report; The engine-shaft to sink on the Trebellan lode below the adit, by nine men, at 7*l.* per fathom, the month, or until stopped by the water. The lode in the north end of the shaft is 3 feet wide, and in the south end 18 inches wide, composed of friable quartz and gossan, with occasional stones of lead and mundic, embedded in a very congenial killas for making a deposit of lead. The adit end south, to four men, at 17*s.* 6*d.* per fm., the month; the lode at present is split, but the parts will be together again (from their appearance) in about 6 ft. further driving; the eastern part of the lode is producing some splendid stones of lead, but hardly enough to value, although we think it probable that shortly we shall have a good lode again; we are evidently going over a good shoot of lead. A stope above this level, by two men, at 8*s.* per fm., the month, and from which we hope to break a good pile of lead. The adit end north, to two men, at 21*s.* per fm., the month; the lode is 18 in. wide, with occasional stones of lead, and looking very promising. The level to drive west from the trial shaft, by four men, at 21*s.* per fm., the month; the lode is from 1 ft. to 15 in. wide, of gossan, &c.

— G. R. Odgers, J. Harris, Jan. 10: We beg to inform you there is no change in the lode in the engine-shaft sinking below the adit since our advise of Saturday. The lode in the adit end south is from 18 in. to 2 ft. wide, composed of friable quartz, flookan, &c., with good stones of lead—a very promising lode indeed. The lode in the stope above this level is looking very well, producing good work for lead. The lode in the north end is 2 feet wide, composed of quartz, &c., with stones of lead; this lode is improving very much in appearance, leading anyone to expect lead in larger quantities. The masons are now working vigorously, and the enginemen have commenced fixing the fly-wheel.

GREAT SOUTH CHIVERTON.—J. Nancarrow, J. George, Jan. 4: The ground in Gifford's engine-shaft continues favourable, and the south part of the lode looks well for the production of lead. The water is on the increase, which is an hindrance to the sinking, but we expect to get down to the 30 in about a week's time. The lode in the 20 east is rather small. The lode in the 20 west is 3 feet wide, and has a very good appearance. Here we are likely to have a change, as the end is letting out more water.

GWYDYR PARK.—W. Smyth, Jan. 8: There is no particular change in the north end, on Gwyn Liffion adit, since last report. The lode in the west end is still small and disordered.

HALLENBEAGLE.—W. Bawden, Jan. 5: We have not taken down the lode in Pinniger's engine-shaft for the past week. In the 56, east of Stone's shaft, the lode 1 ft. wide, producing good stones of copper ore, and looks as if it will improve. In the 47, east of Stone's, the lode is 1 ft. wide, producing good stones of ore. At the 56 fm. level cross-cut, north of Pinniger's engine-shaft, we have not as yet seen the lode.—Reed's Shaft: The lode in the west end of the shaft is 2 ft. wide, worth 15*l.* per fathom. I expect in another week to be down to the 63 fm. level, when we shall commence to drive east and west. In the 53, east of Reed's, the lode is small and unproductive. In the 53, west of said shaft, the lode is 2 ft. wide, worth 6*l.* per fathom. In consequence of the heavy fall of rain and snow our water is a little increased.

HARWOOD.—J. Race, Jan. 4: There is no alteration worthy of notice anywhere in the mine since my report of last week, except in No. 2 stope, which is improved a little; it will yield about 1½ ton of ore at present, and I expect it to be better in a short time. We had a heavy snow storm here this week, which has put a stop to our out-of-door work entirely.

HINGSTON DOWN CONSOLS.—T. Richards, Jan. 9: The 140, east of Bailey's engine-shaft, is without any material change. The stope in bottom of the 130 east is worth 55*l.* per fm. In the 130 west the lode has a promising appearance, producing some saving work. The stope in the bottom of the level is worth 30*l.* per fathom. The stopes in the back of the level are worth 20*l.* per fm. The stopes in back and bottom of the 120 east are worth 18*l.* per fm. In the 120 west the lode is worth 10*l.* per fm. The stope in back of the level is worth 18*l.* per fm.

LADY BERTHA.—F. C. Harpur, Jan. 10: Since the last report no very particular change has taken place in any part of the mine. The lode in the 41, east of shaft, is full 3 ft. wide, composed of peach, mundic, quartz, and ore, worth of the latter 2 tons, or 6*l.* per fm., with a promising appearance for further improvement. In the 31 east we are driving by the side of the lode, and intend taking it down again shortly.

LEAWOOD.—J. Daw, Jan. 10: The lode in the 40 still continues to be of a very kindly nature, although poor for mineral. No other alteration. The engine and pitwork are working well.

LOVELL CONSOLS.—W. Chappell, Jan. 9: The lode in the 12 fm. level end, west of engine-shaft, is 18 in. wide, and continues to produce good stones of tin; the country around it is thoroughly mineralised, and letting out a large quantity of water, which I consider a good omen for a course of tin before us. The men are making good progress in driving a cross-cut north to unwater the perpendicular shaft; they have about 9 feet more to drive to get under the shaft. When the perpendicular shaft is holed to the 12 fathom level it will thoroughly ventilate the mine, and enable us to sink and drive on the course of the different lodes running parallel. The engine is keeping the water with ease.

MINERA UNION.—W. T. Harris, Jan. 10: Douglas's Shaft: The ground consists of chert and carbonate of lime, and at present hard for progress. The ground in the cross-cut at the 40 yard level consists of chert and shale; a little water issues from the forebreast, which is encouraging; the lode cannot be far off.—Brabner's Shaft: The ground in the cross-cut at the 80 yard level, to the red vein, consists of black limestone of a favourable character. The lode in the 60 yard level north is 3 ft. wide, composed of chert, carbonate of lime, and blende. The stope in the back of this level yields good stones of lead, and very promising. The lode in the big cross-cut yields saving work for lead, and improving as we open on it.—Williams's Shaft: We have commenced to drive the 40 yard level north. The adjoining company are now raising good lead within a short distance to our boundry. The lode in the end is 2 ft. wide, and yielding stones of lead.

MOLLAND.—T. Bennetts, Jan. 9: The south part of the lode, in the 72 east, is 4½ feet wide, producing from 15 cwts. to 1 ton of ore per fathom; it is composed of quartz, red iron, and grey ore, accompanied by a larger portion of prian than I have seen here for some time. We have lately met with several small vughs, by which the lode is made difficult to take down. We have blasted a few holes in the north part of the lode, but so far have discovered nothing worth naming; we intend, however, to cut in 1 or 2 feet further should we not meet with the north wall before. This end, according to the dialling, is now up under the winze sunk a short distance below the 62. The winze sinking below our bottom level is now down 10 fathoms; we intend to sink a foot or two for a fork, and then commence our 82 east. We have, however, just met with a slide, which has divided the lode; previous to this the lode was about 2 ft. wide, producing good stones of grey ore. I believe, however, by the appearance of the ground the caunter part of the lode is very near.

NEW CROW HILL.—W. Trelease, Jan. 8: The lode in the bottom end (the 70) is still 6 feet wide, composed of flookan, mundic, quartz, &c., spotted occasionally with lead ore. The new stope in the back of the 55 produces good stones of lead, though nothing as yet to set much value on. No. 1 stope still shows a fine lode in places, but not so good by far as I have sometimes seen it; it is still a splendid-looking lode, and still worth here and there 30*l.* to 40*l.* per fathom. The 35 end is showing a very strong lode, with some excellent stones of lead in it. No change to notice at the bottom of Louisa shaft. We have sold 9 tons 8 cwts. of lead ore, raised this month, at 23*l.* 12*s.* per ton=221*l.* 7*s.* 9*d.*, so that we shall not want your assistance for pay-day.

NEW TAMAR SILVER-LEAD.—James Phillips: The lode in the 10 is looking as well as when last reported on. The rise is still worth 1 ton of silver-lead ore per fathom.

NEW TRELEIGH.—S. Michell, Jan. 10: The stopes generally are looking better than they have for some time past. The 51, east of the new shaft, is looking better; nothing of any importance to mention to-day. Our machinery is working quite satisfactorily.

NEW WHEAL TOWAN.—R. Pryor, Jan. 9: The men are still cutting through the caunter lode met with in the adit, but have not yet found the north wall, the appearance and character of which is good, and I think a great improvement may be shortly expected.

NORTH DOLCOATH.—J. Vivian and Sons, J. Paull, Jan. 7: In driving the 100 fm. level, east of engine-shaft, the appearances are getting more favourable as we approach the point at which we expect to meet with the junction of the north and south lodes. The north part of the lode, on which we are driving, is 4 ft. wide, becoming easier for driving, and letting out more water; it contains spots of yellow copper ore, and has in the last 2 or 3 ft. driving changed its direction, and is now bearing faster towards the south part.

NORTH DOWNS.—John Grenfell, Jan. 9: The 40, east of King's shaft, on the south lode, as well as the stopes in back and bottom of this level, are without any change to notice since the report for the meeting.—New Brigan Lode: The 50 east, on this lode, is presenting a promising appearance, and we look for an early improvement. In the 40 cross-cut, south of Bennetts's shaft, to intersect the south lode, we have cut a branch producing good stones of ore, which, from the bearing and underlie of it, looks like a part of the said south lode, but it is so near to Bennetts's cross-course that we can hardly say until we prove it a little further off, which we shall do, and let you known the result as soon as possible. No change in any other part of the mine.

OKEL TOR.—John Rodda, Jan. 10: The cross-cut south from the 80 east, although still in the lode, will have to be driven some distance further to reach the ore-bearing part of it. We have three stopes in the back of this level, producing on an average 3 tons of ore per fathom. We have put out a cross-cut south in the 65 east, and have intersected a lode, which I believe to be the same as recently cut in the 50; we are into the lode about 3 feet, and, I am pleased to say, for this distance it will turn out from 3 to 4 tons of ore per fathom. When the lode is cut through I believe we shall have a real good course of ore. I regard this as a splendid discovery, inasmuch as the lode is running parallel with, and south of, our present workings for some considerable distance at least. Wilton's stope, in back of the 65, will yield 2½ tons, Peardon's will yield 3 tons, and Crossman's 2½ tons of ore per fathom. The lode in the 50 fm. level end is much improved, and will now yield 8 tons of ore per fathom. Hele's stope, in the bottom of this level, will yield 2½ tons of ore per fathom. The general prospects of this mine are looking well.

OLD GUNNISLAKE.—H. Rickard, Jan. 9: I hope to complete the cutting of plat, barrow-road, &c., at Parker's shaft, by the end of this week, which will be our monthly setting-day, when I propose to drive both east and west, on as pretty a lode as can be seen. Ground easy for driving.

PAR CONSOLS.—F. Puckey, J. Hosking, Jan. 7: Eastern, or Copper part of the Mine—Treffry's North Lode: In the 80 fm. level end, driving east of Treffry's north shaft, the lode has made a splice, but which is again opening wider, and looking promising for improvement. We have sunk a winze 10 fms. below this level, through a lode worth from 10*l.* to 12*l.* per fm.; we intend sinking this winze 6 ft. deeper, and commence driving a middle or 90 fm. level east, under

the bunch of ore that is gone down below the 80 fm. level. In the stopes in back of the 10, east of cross-cut the lode is 3 ft. wide, and of a promising character, composed of quartz, peach, mundic, and copper; worth for the latter 12*l.* per fathom. In the rise in the back of the 80, west of the cross-cut, the lode is 18 in. wide, producing occasionally a little copper ore.—West's Lode: In the 60, east of Trefry's shaft, the lode is 2 ft. wide, well defined, containing a quantity of mundic a little black jack, and never looked more promising for producing copper than at the present time. In the 40 and 30 fm. level ends there is no improvement since last reported on.—Western, or Tin part of the Mine: There is no improvement whatever in any of our stopes or tribute pitches.

OKEHAMPTON.—J. Richards, Jan. 9: I beg to inform you good progress is being made in the engine-shaft; the ground is exceedingly congenial for the production of metallic mineral, and which I believe exists here in very great abundance.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, Jan. 5: The lode in the 148 west is producing stones of tin, and promising improvement. The lode in the 130 vest is worth 14*l.* per fathom for 6 feet in width, and no south wall. The lode in the stope in back of this level, by cross-course, is worth 20*l.* per fm. The lode in the 120 west is worth 8*l.* per fathom. The 120 east winze is holed to the 130; we shall commence stoping at once. The lode in the 100 east end is worth 9*l.* per fathom. The lode in the 100 east rise is worth 6*l.* per fathom; the cross-course is producing a little copper ore.—Cobbler's Shaft: The lode in the 110 west end is worth 9*l.* per fathom. The lode in the 90 north is improving for tin, and producing stones of copper ore. We sold on Tuesday last at Cardevras 5 tons 19cwts. 2 qrs. 4 lbs. of black tin for 298*l.* 13s. 10d.

PENHALLS.—S. Bennetts, Wm. Higgins, Jan. 5: During the past fortnight there has been a little lode taken down in the 60 east, without showing much alteration. In the 60 west the lode is a little more regular, but not more productive. In the 50 west the new lode continues worth from 10*l.* to 12*l.* per fm. The lode east of the 50 fm. level ends, on Cowling's lode, is without any material alteration. The rise between the 50 and 40 fm. levels is not yet holed, but we are daily expecting to do so; the air, however, is bad just now, which seriously interferes with progress. In the various pitches but little lode has been broken since setting-day.

PENHALE AND LOMAX.—J. Kitto, Jan. 9: The bottom plunger-lift, which has occupied a considerable time in fixing, in consequence of having so much ground to excavate, is now complete, and the forking below the 65 is going on all right, and is being pushed with all possible speed, and unless any unforeseen accident occur the bottom of the mine will soon be reached. We have several pares of tributers at work above the 65, and some of the pitches are looking very well. We have put in a dressing-floor at the south shaft, and have began to prepare ore for the market. The engines are working exceedingly well.

PRINCE OF WALES.—J. Gifford, W. Gifford, Jan. 8: In the 55 fathom level cross-cut north the ground is more favourable for driving. The 55 fathom level cross-cut south is in 6 fathoms from the shaft, and we expect to cut the lode in from 9 feet to 2 fathoms further driving. The ground is highly mineralised—precisely the same character as in the cross-cut in the 45, with strings of rich grey and yellow copper ore—indications which lead us to expect a good course of ore will be the result when the lode is reached. In the 45 west the south part of the lode, which we are driving on, is 2 feet wide, worth 6*l.* per fathom, but from the tearing of the lode east of the cross-course we do not think it is the main (or ore-bearing) part, and we shall put the men to strip down the north part to prove it. In the 45 east the lode is 4 feet wide, worth full 20*l.* per fathom, and promising further improvement. The stope in the back of the 45 east is worth 15*l.* per fathom. There is no change in the 30, east or west, since last report. We are getting on with our dressing with all possible speed, and if the weather proves favourable we hope to sample from 40 to 50 tons of copper ore at the end of this month.

— Jan. 9: A breast-head, or the foot-wall of the lode, is discovered in the 55 fathom level cross-cut south, which is letting out much water. We cannot see the wall more than 1 foot square.

— Jan. 1: *Telegram:* Lode cut in the 55 fathom level cross-cut. Hole bored in 1 foot. Good work. Particulars by post.

PROSPER UNITED.—John Nicholls, Jan. 9: The 90, west of Hand's, is worth 12*l.* per fathom for tin. The lode in the 80 west is 2 ft. wide, producing a little saving work for tin. The winze in bottom of this level is worth 7*l.* per fathom for copper and tin. The lode in the 70 west is small and poor. The 60 west is poor. The lode in the 50 west is improving; it is now 2 ft. wide, worth 3 tons of copper ore per fathom. The lode in the 80, east of Hosking's, is improving for tin, now worth about 5*l.* per fathom. The 70 east is worth 9*l.* per fathom for copper and tin. The 60 east is poor. The stopes and pitches throughout the mine are producing much as for some time past, and the dressing of copper and tin is going on satisfactorily.

— John Nicholls, Jan. 9: I am sorry to inform you the crank of our stamping-engine broke in two this afternoon. Mr. Treglown and I have just returned from the foundry, and we hope to get it to work again on Saturday: this will throw us back in our dressing.

PROVIDENCE.—Wm. Hollow, P. Rogers, J. White, Jan. 9: Caunter Lode: The lode in the 85 east is 3 ft. wide, worth 20*l.* per fathom. The lode in the rise over this level west is 2 ft. wide, worth 6*l.* per fm. The lode in the 75 east is worth 16*l.* per fm. The lode in the 65 east is worth 6*l.* per fm. The lode in the 55 east is worth 10*l.* per fm. The lode in No. 6 Carbona is worth 60*l.* per fm. The stopes over are worth 20*l.* per fm. Our tribute pitches are producing the usual quantity of tin.

REDMOOR.—T. Taylor, Jan. 9: We have no change in the shaft or end since last report. The shaftmen are working satisfactorily, and hope to complete their bargain by the end of the month—*i. e.*, the sinking of the shaft, divide, case, and fix the ladders in the shaft, take out penthouse, &c.

ROARING WATER.—H. Thomas, Jan. 8: There is very little change in the lode west of Grady's shaft since last week, but I have every reason to expect there will soon be an improvement.

ROSECLIFFE AND TOLCARNE.—R. Pryor, J. Phillips, Jan. 9: The ground in Lindo's engine-shaft, sinking below the 40 fathom level, is still hard, and become very spare for progress. Other bargains much the same as when last reported on. A full setting report shall be sent on next week.

ROSEWARNE UNITED.—T. Richards and Son, E. Carthew, Wm. Tenby, Jan. 10: The lode in the 90 east and west is unproductive for copper ore. The lode in the 80 west contains some good copper ore. We have holed the winze from the 70 to the 80 west, and the men are engaged in stoping cast and west of the winze, in a lode worth 10*l.* per fathom in each stope. The 50, east of boundary shaft, on the north lode, contains a little copper ore. In the 20, east of Hender's shaft, on the north lode, we have met with a little ore during the week; the lode has been looking promising for a further improvement.

ROSEWARNE CONSOLS.—J. Nancarrow, R. Knuckey, Jan. 7: There is no alteration in the 100, east of Ellen's; we are pushing on the driving as fast as possible. The east stope in back of the 90 is worth 5*l.* per fm. The west stope in back of the 90 is worth 4*l.* per fm. The stope in back of the 80 east is worth 4*l.* per fm. The lode in the 80 west is from 15 to 18 in. wide, and looks kindly; we have commenced stoping the back of this level, and the lode has improved, now worth 5*l.* per fm. The lode in the 70 west contains a little ore. There is no important alteration to report in the pitches since last week. The mine, on the whole, looks a little better.

SORTRIDGE CONSOLS.—Jas. Richards, Jan. 10: Hitchins's engine-shaft is in regular course of sinking below the 122; it is down 11 fms., and good progress is being made. In Scoble's stope in back of the 40 east, on the south part of the main lode, the lode is 1 ft. wide, and yields ½ ton of ore per fm.

SOUTH CONDURROW.—J. Vivian and Sons, Wm. Williams, Jan. 5: In the past week we have been cutting ground in King's shaft from the 51 to the 61 fm. level, to bring rods down, and fix a 10-inch plunger at the latter level. In the 51, east of King's shaft, the lode is 3 ft. wide, composed of quartz and flookan. In the 51, west of King's shaft, there is a very fine-looking lode, 3½ ft. wide, producing a little copper throughout; this end is now within 8 or 9 fms. of the ore ground which we are now stoping in the level above, and it should be noticed that the lode, whilst presenting equally as favourable an appearance as at any point above, is larger, harder, and altogether of a more masterly character, so that we are induced to think that on coming into ore ground it will prove more extensive and lasting than any discovery we have yet made. There is more water issuing from this end than we have ever before had from any part of the mine. In the 40, west of Vivian's shaft, the lode is 1½ ft. wide, and looking a little more favourable than it has been. In the 30, west of Vivian's shaft, the north part of the lode, on which we are driving, is 2 ft. wide, containing some good sized patches of black copper ore. In the 20, west of Vivian's shaft, the lode is 4 ft. wide, composed of quartz and gossan, with mundic and black copper ore scattered throughout.

SOUTH DARREN.—J. Boundy, Jan. 7: I have no alteration to report in any of the underground operations in this mine, more than that the 60 west is letting out more water, and the lode looking more promising for lead and copper. In consequence of the severe weather, nothing has been done towards the dressing for the past week, all the machinery being at a standstill. We have now a nice change in the weather, and I hope to resume surface operations again to-morrow.

SOUTH DOLCOATH AND CARNARTHEN CONSOLS.—William Roberts, Jan. 9: The tribute pitches still continue to look tolerably well. The men are working regularly, and there are some good piles of ore on the dressing-floors.

SOUTH HERODSFOOT.—William Goldsworthy, Jan. 9: There is no change to notice in the ground in the engine-shaft this week—still a beautiful killas; but our progress has not been so good as we could wish, owing to the great increase of water, caused by the heavy floods of late.

SOUTH TREVENNA.—T. Jennings, Jan. 10: The copper lode in the deep adit level is 3 ft. wide, composed of spar, mundic, and well spotted with grey copper of good quality; it shows every indication of being as good a lode as in the shallow adit in a little further driving. We are not many fathoms from being under the branch of ore in the shallow adit. The tin lode is producing good work for our stamps. We have commenced dressing. Our stamps work well. The machinery is all in good working order.

ST. IVES WHEAL ALLEN.—J. Nancarrow, J. Daniel, Jan. 10: The Carbona lode in the 40, east of Giesler's, is not quite so large as last week, but is larger than at any time previous to that; the strong mundic continues; the lode is tinny for the whole height of the end, and towards the back yields some rich tinstuff, which is likely to improve.

TRELYON CONSOLS.—R. James, E. Pooley, Jan. 10: We sent to the smelting works on Tuesday last a little over 6 tons of tin for four weeks, which will about pay costs for that period.

TREVENEN AND TREMENHEERE.—J. Medlyn, C. George, Jan. 9: The bottom end yields saving work for the stamps. The stope in the back is worth 6*l.* per fm. The 187 and 172 fm. level ends are fair, and likely to be productive shortly. We are cross-cutting south at the 162 fm. level end, and are often passing through small branches of tin; this indicates the main part of the lode to be south of the level. The lode in the winze is worth 30*l.* per fm. for its length. We have completed the cross-cut at the 150, east of the old east shaft, and we find there are three lodes here, occupying a width of 12 ft.; these all yield tinstuff of low quality; we have commenced to drive on the south one. No. 1 stope, in this back, is worth 6*l.*; No. 2, 10*l.*; and No. 3, 8*l.* per fm. The stope in the 140 is worth 7*l.* per fm. The 135, east of old west shaft, is worth 8*l.* per fm. The stope in the back is worth 7*l.* per fm. We are still clearing the 125 over the old bottoms we discovered in the level below, and hope to be enabled to clear it up soon.

TREWEATHA.—T. Foote, J. Scoble, Jan. 8: Setting Report: Friday last being our setting-day, the following bargains were set:—To drive east at the 50 north, 1 fm. stent, or cut through the lode, by four men, at 8*l.* per fm.; our object for doing this is that the part of the lode we have been driving on is poor, and we find that there is more lode standing to the east of our present driving. The 50 south, to four men, stented 3 fms., at 5*l.* per fm.; lode worth 5 cwts. of lead per fathom. To rise and stope in the back of this level, to six men, 4 fms. stent, at 6*l.* per fm.; lode worth 8 cwts. of lead per fm. The 40 south, to six men, 3 fms. stent, at 8*l.* per fathom; lode poor. We have no stope in the back of this level, the productive ground being taken away. We have four men putting in new timber in the 40 north, the old being broken very much by the heavy ground; as soon as this is completed, which we hope to do by the end of this week, we shall set the stopes again. In Nos. 1 and 2 stopes, in the back of this level, the ground is all taken away as high as the 30; but north of the 30 end, and finding that the ore is making up above the back of the 30, we have placed the men, eight in number, to make the 30 good those stopes, at 2*l.* 10s. per fm., 5 fathoms stent, which will complete this work; after which we purpose to drive the 30 north, and set the stopes in back of the 30 in place of those that were in the 40. We have suspended the stope in the 30 south, the lode being poor, and have placed the men to sink a winze in bottom of the 30 south, 2 fms. stent, to four men, at 9*l.* per fm.; lode worth 5 cwts. per fm., and promising to improve. We have suspended the stopes in back of the 20 south; also the stope in back of the 33, north of footway shaft, as the lode is poor, and will not pay for working. We have placed four men to stope in bottom of the 20 south, stented 5 fathoms, at 1*l.* 15s. per fm.; lode worth 4 cwts. of lead per fm.—South Mine: The 73 to drive south, by six men, 3 fms. stent, at 6*l.* per fm.; lode producing saving work, and promising improvement. We shall also place some men to drive the cross-cut west towards Trelawny lode at once, and push on this work as fast as possible, as there is no doubt but that the Trelawny lode is west of Treweatha lode. The tribute pitches, on the whole, are not looking quite so productive as they have been, still the men are working in good spirits, and hope they will get good wages. All our machinery is working well, and we are getting on as fast as possible with our dressing so as to get another parcel of ore for market.

TRUMPET CONSOLS.—R. Quentrall, Jan. 9: The mine is looking very well throughout, and future accounts will tell the tale.

VIGRA AND CLOGAU.—W. J. Holman, Jan. 10: The different workings at the No. 2 mine are looking well. From the driving west of the No. 1 shaft we yesterday broke some visible gold from the forebreast. The lodestuff looks most promising, and will, no doubt, be good stamps work. The lode is from 4 to 5 ft. wide. In the end being driven east from No. 3 shaft the lode has also improved, yielding specimens of bismuth, or white metal, iron pyrites, and copper, which we always find to accompany the gold in this mine; the lode is now 8 feet wide. In the adit east from No. 2 shaft the visible gold has been continuous throughout the week; the lode still maintains its favourable appearance, and is from 5 to 6 feet wide. The cross-cut from the deep adit is progressing satisfactorily. We expect to cut the lode in the early part of February. At the old Clogau Copper Mine, the cross-pieces of timber for carrying the longitudinal sleepers have been fixed to the bottom of the mine; the men will now commence laying on the longitudinal sleepers and rails. The drivage under the 20 is still being continued, in a lode 4 feet wide, which produces stones of copper, but not sufficient to value. At the Vigra adit there is not any change. The branch railway to the No. 2 mine is being pushed on rapidly, and will be completed by the end of the present month, which will considerably reduce the cost of transport of the minerals to the reduction works. The severe frost, and the breaking of a driving-wheel, has prevented us stamping since the middle of last month.

WALKHAM AND POLDICE.—J. Lean, Jan. 5: The lode in the 50 south is of a very promising character, being composed of quartz, prian, and mundic, with lead interspersed—I cannot give you the full size of the lode, having only taken down about 2 feet of the west, or main part; the lode indicates improvement as we proceed. In the 38 fm. level south we are only carrying the western part of the lode, which is composed of spar, blende, lead, and copper ores; I have to-day removed the men from this place, and put them to stope the lead ground driven through in the 50; in driving through the lead ground in this level the lode was the most productive for 2 feet high from the bottom of the level.

WEST BASSET.—Wm. Roberts, jun., Jan. 6: Grenville's Engine-shaft: The lode in the 154, east of cross-cut, is 2½ ft. wide, producing 1 ton of ore per fm.; in the same level west the lode is 1 ft. wide, producing stones of ore; the same remark will apply to the 144, west of cross-cut. In the winze below the 134 east the lode is 2 ft. wide, dressing-work for copper ore.—Thomas's Shaft: The lode in the 75 east, on the middle lode, is 1 foot wide, producing 1 ton of ore per fm. There is a promising lode in the 65 east 2½ feet wide, saving work for tin; tribute ground. In the winze below the 52 the lode is 2 feet wide, producing good work for tin. Other parts of the mine are without alteration worthy of notice.

WEST CARADON.—Wm. Johns, N. Richards, Jan. 7: At Downing's lode, in the 170 fm. level, both east and west of cross-cut, the lode continues to be split into branches, containing good stones of yellow copper ore. Vivian's lode, in the 170 west, is without any change to notice, producing occasional stones of ore. There is a winze sinking below the 104, in advance of this end, in which the lode is showing a kindly appearance; and seeing this piece of high ground before us, we are encouraged to hasten on the end with all possible speed. The 128, on Jope's lode, is looking a shade better, both for copper and for progress. In the 116, towards the south part of the lode, and in the 104 west, we cannot speak of much change since our last report. In Clymo's lode, west of the cross-cut in the 92, a little more fluor-spar is making its appearance; this we consider somewhat a favourable omen. In the 92 fm. level cross-cut, towards Jope's lode, the ground is hard for progress. In the 70 west, on Menadue lode, we are opening out moderate tribute ground. We are on the way of sinking a few fathoms below the surface on what we consider Clymo's lode, just to show the bearing of the lode, and when satisfied, will put us in a position where to fix the new shaft; as far as we are down, the character of the lode shows a very promising appearance. We have sampled (computed) 133 tons of copper ore.

WEST SHARP TOR.—W. Richards, Jan. 7: We obtain a little rich copper ore from the south part of the lode in the 174, west of the cross-cut, but there is no particular change since last week.

WEST ST. IVES.—Thomas Uren, Jan. 9: I am getting the whim erected, so that we can draw the copper ore to surface we are daily breaking away. The lode continues to improve, and I fully expect when the north branch intersects the lode that we shall have a rich course of ore.

WEST WHEAL KITTY.—Wm. Vivian, Jan. 9: There is no change in the adit end west since last week. The back of the adit level is 7 feet wide, worth about 18*l.* per fm. for tin. We are driving east of the cross-course in the adit level, as I stated last week. The lode is from 6 to 8 ft. wide, but not of any value. At the shallow level west we are driving by the side of the lode. The country rock is of a promising nature. I think we may soon expect an improvement at this point. We have about 4 fms. to drive to get over the tin back at the adit level, where we intend to sink a winze; by doing so we shall be able to break our tinstuff at a much cheaper figure than we are now doing.

WESTMINSTER.—F. Evans, Jan. 9: The late very unfavourable weather has almost stopped us from building, consequently little has been done towards getting up Thompson's engine-house during now nearly a fortnight. Our engine is only working occasionally to supply water to the winding-engine, in order to draw stuff from the parties cutting down Thompson's shaft, and I am pleased to say this will soon be accomplished and complete for pitwork. I have already written to you respecting the eastern ground, and I believe Capt. Kitto is of the same opinion as myself, that operations conducted there, as recommended, would soon open up good paying ground for lead, and eventually lead to a large property, that would become profitable, seeing it could be worked without the aid of machinery.

WHEAL AGAR.—W. Roberts, Jan. 9: The lode in the 140, west of cross-cut, continues 5 ft. wide, saving work for tin. In the 140, east of old whim-shaft, the lode is 4 ft. wide, producing good stones of yellow ore and low quality tinstuff. In the 130 east the lode is 4½ ft. wide, producing good work for tin, tribute ground.—Western Shaft: The lode in the 110 east is 1½ ft. wide, composed of peach, spar, and mundic. The lode in the 90 east is 3½ ft. wide, producing occasional stones of tin. Our sale of tinstuff yesterday amounted to 100*l.*

WHEAL BULLER.—Jas. Inch, Jan. 9: Stevens's shaftmen are still cutting plat at the 92 fm. level; we commenced to draw from that level this day. The 80 east is worth for tin 25*l.* per fathom. The winze sinking under this level is worth 50*l.* per fathom. The stope in the back of this level is worth 9*l.* per fm. The 80 west is worth 25*l.* per fathom. The stope in the back of this level is worth 18*l.* per fathom. The 70 east is producing tin, not of much value.—Hocking's Shaft: The 80 east, on the north tin lode, is worth 5*l.* per fathom. The 70 east is producing tin, not of much value. The 70 west is producing stamping work. The rise in the back of the 60 is worth 20*l.* per fathom. All other parts are without alteration.

WHEAL CREBOR.—J. Gifford, Jan. 8: In the 120, both east and west, we still continue to drive by the side of the lode; in the latter we expect to cut the western cross-cut some time in this month, when we shall cut through the lode. In the 108 east the lode is 2 ft. wide, composed of capel, quartz, mundic, and copper ore, but not enough of the latter to value. In the cross-cut south in the 96 west the ground still continues favourable for driving. In the 96 east the lode is 2 ft. wide, of a very kindly appearance, letting out much water; the same remark will suffice for the 84 east. In the winze in the bottom of the 96 east the lode is 2½ ft. wide, yielding 1½ ton of copper ore per fm. We hope to sample 50 tons of copper ore at the end of the month, and if the standard continues to advance we shall set some tribute pitches at our next setting-day.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 10: We have met with another small branch in the 90 cross-cut north, but nothing worthy of opening on; the ground continues of that favourable kind for mineral should a lode be met with.

WHEAL KITTY (Uny Lelant).—Wm. Rosewarne, Jan. 10: North Russoe Lode: There is but little alteration in the value of the ends driving on this lode during the past week.—Gowan Lode: The lode in the winze sinking below the 80, east of Roger's shaft, is worth 8*l.* per fm.—North Gowan Lode: The lode in the 60, west of Roger's shaft, is producing a little tin. The lode in the rise above the 60, west of Roger's shaft, is opening tribute ground.—South Russoe Lode: The lode in the 20, driving east of the Boundary shaft, is worth 5*l.* per fm.

WHEAL KITTY (St. Agnes).—S. Davey, W. Polkinghorne, Jan. 5: No change has taken place in the 82, driving west of Holgate's shaft, since last report.—Pryor's Lode: In the new shaft, sinking below the 65, the lode is 6 ft. wide, and worth for tin 15*l.* per fm., with a better appearance. In the 65, driving west of shaft, the lode is thrown down by a gossan, which has for the time lessened its value; now worth for tin 18*l.* per fathom. No change worthy of remark in the 95, east of shaft. In the 54, driving west of shaft, the lode is 2½ ft. wide, and worth for tin 7*l.* per fathom. The lode in the winze sinking below the 44, west of shaft, is worth for tin 15*l.* per fm. In the 44, driving east of shaft, the lode is 1½ ft. wide, and worth for tin 4*l.* per fathom.—Wheal Vottle Lode: In the 44, driving west of cross-cut, no lode has been taken down during the week. In the 24, driving east of cross-cut, the lode is worth for tin 5*l.* per fathom; and in the same level, driving west of cross-cut, 3*l.* per fathom.

WHEAL MARGERY.—R. James, Wm. Rogers, Jan. 10: At the American shaft, sinking below the 155, the lode is 6 ft. wide, and worth 17*l.* per fm. for tin for length of shaft (12 feet). The 155 east, and also the stope over, will a little more than pay for working. In the 155 west the lode is worth 10*l.* per fm. for copper. The stope over is set on tribute at 8s. in 1*l.* The tribute, on the whole, is looking quite so well as it has for some time past.

WHEAL MARY ANN.—P. Clymo, J. Harris, J. Stevens, Jan. 10: Clymo's shaft is sunk 8 fathoms under the 220. The cross-cut in this level is extended 15½ fms. towards the lode. In the 210 north the lode is 1 ft. wide, worth 4*l.* per fathom; in the same level south it is 3 ft. wide, worth 14*l.* per fm. In the 200 north it is 2 ft. wide, worth 7*l.* per fm.; in the same level south it is 2½ ft. wide, worth 10*l.* per fm. In the 190 north it is 2 ft. wide, worth 7*l.* per fm.: in the same level south it is 3 ft. wide, worth 14*l.* per fm. In the 180 north it is 2 feet wide, worth 5*l.* per fm. The stopes and pitches are producing much as usual. We sold on Dec. 28 two parcels of lead ore—No. 1, computed 52 tons, to Burry Port Smelting Company, at 25*l.* 0s. 6d. per ton; No. 2, computed 30 tons, to R. Michell and Son, at 14*l.* 5s. per ton.

WHEAL SPARNON.—Wm. Tregay, E. Chegwin, Jan. 5: Jardine's Shaft: Pulsford's lode, in the pitch in back of the 60 west, is worth 15*l.* per fm. The new lode in the 20 east rise is increasing in breadth, and produces good stones of copper ore.—Old Sump: In the 45, east of cross-course, the north lode produces good stones of copper ore. In the 45 the lode will produce 1 ton of copper ore per fathom, but is not yet quite clear of the influence of the cross-course.—Belfry Shaft: The lode is very mundicy, with good stones of copper ore. The south lode produces fair quality tinstuff.

WHEAL TREVENNA.—T. Jennings, Jan. 10: We are making good progress in sinking our new engine-shaft, with nine men; the ground is favourable for sinking. I hope to get the lode cut 30 fms. deep by the time appointed, when good returns may be expected. Our small engine is working well.

FOREIGN MINES.

SAN PEDRO DEL MONTE SILVER.—W. H. Chynoweth, Nov. 23: I have not only the satisfaction to inform you of the continuation of the favourable state of our former discoveries, but the increased pleasure to communicate the marked improvement in other important points of these mines, particulars of which will be gathered from the following report thereon:—Santa Elena shaft has been cased and divided from the surface down to Wilson's level, for drawing with the whim just completed, and sunk 3 yards during the month. The ground in bottom of the shaft is rather hard, and we constantly meet branches, which drop into Wilson's lode. Wilson's level, north and south of cross-cut, continues to open good ore ground. The south end is greatly improved since my last report, the ore being now 5 ft. high in the end. The cross-cut from San Carlos level has reached Wilson's lode, where it is ramified and poor, as predicted in my communication of Sept. 24. A winze has been commenced sinking to afford ventilation to Wilson's level, and the lode appears to be concentrating as we go down. At San Pedro adit the end is steadily improving; lode large and masterly, and producing ores, per assay, of 155 ozs. per ton. San Francisco winze continues to be sunk through orey ground. In San Enrique level, although now and then stones of silver ores are met with, the lode will remain in a disordered state until we have driven through the cross-course. At San Guillermo shaft the sinking progresses satisfactorily, and the lode in the shaft is becoming productive. Stones assayed yesterday yielded 83 ozs. per ton. San Lorenzo level continues without change. At San Juan adit, after persevering in advancing this level 100 varas, our exertions are rewarded with a decided improvement. Good ores were discovered last week, three samples assaying respectively 1021, 346, and 167 ozs. per ton; the lode is 2½ ft. wide. Great value may be attached to this improvement, as it is 130 varas ahead of Wilson's level (south end), and in virgin ground. Altogether, these mines have not hitherto been in such a promising state, and now that we are approaching the centre of the mountains, increasing in depth, and fairly laying open the mines, I have every confidence that my future reports will continue to afford satisfaction. —Reduction of Ores: This has now become a matter for serious consideration, in which I must principally be guided by Mr. Sewell, who is now here to superintend this important department. To be hasty in deciding on the method to be adopted for extracting the silver from the ores, and in selecting the site for the reduction works, might tend to a false step being taken, and lead to fatal results to the company. As I stated last month, we have several tons of ore already dressed, and the produce is gradually increasing in quantity, while the quality maintains its former remunerative ley. I will render every assistance in my power to expedite the great desideratum so anxiously looked for—returns; in which both Mr. Sewell and myself will be aided by Capt. Bishop and our staff of artizans. Next month we shall be in a better position to write more fully and decisively on this subject.

CAPULA.—Capt. Paull, Dec. 7: I mentioned in my last that Mr. Chynoweth was of the same opinion as myself—that it will be losing time and money to erect a small engine at Capula. We cannot go any deeper with the horse-engine; eight of the horses have died since we stopped the engine. [They require a 40-inch cylinder.] We should have smelted all the good ley metal some time past had we smelting-furnaces. We are repairing the old furnaces in San Pascual, that have not been used for many years. We have got in the fire-stone, and the masons ought to finish one furnace next week. To day I expect the 25 cargas of greta from Fimapan. Torta No. 10 only gave two-thirds of its ley, we shall get several marcs from the Polvillos, which we are going to smelt. The lode in the Esperanza end has a regular branch of ore again, but not very wide; it was hove a little to the south by the cross lode. We are now driving towards the south wall, which we have not seen for many varas. We have put six men in San Enrique level, so as to get under the old workings of San Luis with as little delay as possible. The lode is just the same, producing metal of 3 marcs per monton. No doubt it will improve in depth. The old workings of La Luz must be to the east of San Luis. We are pushing on the works in the backend as fast as we can with the number of men employed. We are short of men, several having left for soldiers. We can get any kind of pitwork cast at Opulco Foundry, and delivered at Real del Monte for $8 per quintal (100 lbs.) The cast-steel pumps sent out for the Real del Monte were a complete failure; the wrought-iron ones answered better, and at any time we should require any from England I should prefer the latter.

PONTGIBAUD.—W. H. Rickard, Jan. 2: Roure: The cutting of the 125 metre level plat, at Richards's shaft, proceeds favourably; during the past month we fixed skip guides from the 100 to this level. The 100 metre level, north of Richards's shaft, is in a soft lode, without any ore. The same level south is also poor. The 80 metre level south has entered a kindly looking lode, composed of quartz, mundic, and spots of lead ore. The same level north, on Emily's lode, has been suspended, and the men put to undercut the lode behind the end for stoping. A rise in the back of this level, on the main lode, yields a little ore that will work on tribute. The 60 metre level south yields 1½ ton of ore per fathom. We have set a winze to sink in this level a little ahead of the 80 end, which will, probably, open stoping ground. In the 40 metre level, south of Agnes' shaft, we have put the men to rise in order to make a communication with the 20 for ventilation, which is much wanted. The winze sinking below this level yields 1½ ton of ore per fm. The 20 metre level south has improved in appearance; the lode contains quartz, mundic, and a little ore. The adit level south continues poor. The stollen is being driven by six men with all dispatch; the lode is strong and kindly. We have set a trial cross-cut in this level west from the whim-shaft, to see if any part of the lode lies in that direction. Our stopes throughout this mine yield pretty well; we have 13 now working, and 24 tribute pitches, at prices varying from 40 frs. to 110 frs. per ton of ore, 50 per cent. lead.—La Grange: The sinking of Nosky's engine-shaft below the 60 metre level goes on slowly, because of the inefficiency to draw and pump at the same time, so as to keep away the water properly at this season of the year. The lode at the bottom of the shaft yields 1⅛ ton of ore per fm. The 60 metre level, south of shaft, yields stones of ore. The same level north yields ½ ton of ore per fathom. The 40 metre level north is in a kindly looking lode, but poor. We have three stopes and nine tribute pitches in this mine, yielding a fair quantity of lowish quality stuff.—Mioche: The adit level, south of Railway, is in a lode 2 ft. wide, containing stones of blende, spotted with ore.—La Brousse: The 40 metre level is poor. The same level south yields 1½ ton of ore per fm. The 20 north has entered stiffer ground; the lode is small and poor. The 20 south yields 1 ton of ore per fm. The same level, north of junction, on the eastern part of the lode, yields 2 tons of ore per fm. The adit level north is without change.—Pranal: The cross-cut west, in the 50 metre level north, has cut the western part of Susan's lode, which looks kindly, and is yielding ½ ton of ore per fathom. The 30, south of winze, on St. Matthew's lode, opens tribute ground. The same level north yields stones of ore. The 8 metre level north, on the same lode, yields 1 ton of ore per fm.—Surface: Our dressing during the past month has been carried on without interruption, with a good supply of water and favourable weather. Our samplings have amounted to about 292½ tons. Since the above was written the weather has set in very cold. Our laveries at La Rancoule and Barbecot are very nearly stopped.

AUSTRALIAN MINES.

YUDANAMUTANA COPPER.—The superintendent (Nov. 23) states—"I have to advise a further shipment of 13 tons 7 cwts. of copper per *Goolwa*, which vessel has sailed. I have also shipped, per *City of Adelaide*, 3 tons of copper, and hope to send 50 tons by her, and have now at port, and in transit thereto, 17 tons of copper, which will be shipped in about ten days. The wood contractors are delivering a large quantity of fuel weekly, and we shall shortly have more than twelve months' supply on hand." Capt. Anthony reports, under date of Nov. 17:—"Bilumun Mine: The bottom of the 10 fm. level, north of No. 4 shaft, is being stoped by six men: lode 8 feet wide of 12 per cent. ore as broken, and three men are stoping the back of the 10; lode 5 feet wide of 14 per cent. ore as broken. No. 2 furnace has been at work during the past four weeks, and made 18 tons of copper. No. 3 furnace has worked two weeks, and made 9 tons of copper; both furnaces are now in good repair. During the last month I have smelted the following ores—54 tons of burrows, 73 tons of smalls, and 30 tons of third and fourth class ores, and made therefrom 27 tons of copper."

WORTHING.—Nov. 28: The sinking of the shaft to the 83 had been commenced, and the costs for the month were 145*l.* The quantity of ore raised was 200 tons of about 17 per cent., and 40 tons of regulus had been made and sold, leaving on hand 113 tons of ore and 4 tons of regulus. Hands employed, 126.

PORT PHILLIP AND COLONIAL GOLD.—Four weeks' return for Oct.: Quantity of quartz crushed 4342 tons, yielding 1355 ozs. 10 dwts. of gold, or an average of 6 dwts. 5½ grs. per ton. The receipts were 594*l.* 4s.; payments, 430*l.* 13s. 7d.; profit, 164*l.* 10s. 5d. Amount divided between the amalgamated companies 150*l.*; balance remaining in hand 71*l.* 18s. 8d.; Port Phillip Company's proportion, 97*l.*—Three weeks' return for November: Quantity of quartz crushed 320 tons, yielding 999 ozs. 9 dwts. of gold, or an average of 6 dwts. 5 grs. per ton. Remittance, 95*l.* 8s. 8d.

YORKE PENINSULA.—At Kurilla Mine the operations in the 35 fm. level continue to develope improvement in the lode as the point is approached at which ore was left going down in the 25 fm. level. Capt. Semmens reports:—"When we resumed working on the 24th ult. the end of the level was 7 fms. 4½ ft. east of the shaft. Since then we have driven 3 fms. 5 ft. I have had the lode cut through in the present end of the level, and it is between 4 and 5 ft. wide, composed of black and yellow ore, with a portion of quartz and mundic. The lode is looking much better at the 35 for producing copper than at the 25 at the same distance from the shaft. In cutting through the lode this week we have raised some large lumps of solid black and yellow ore. On the whole, I consider the lode looking well. It varies in width; where we cut through it, 4 fathoms behind the present end, it was between 8 and 9 ft. wide, but not containing as much copper as where we have now cut through it; no doubt it will widen again in the course of driving. It is a strong, powerful lode, and there is no doubt in my mind but that it will ultimately prove a good one if thoroughly developed. There is every indication that it will prove so. We are 10 fathoms deeper, and almost under the place where the lode began to make ore at the 25. We shall require a winze for ventilation to take the lode away from the back of the 35. It is my opinion that all the lode between the two levels will pay well for taking away. There is every indication at present that there will be the continuation of a good lode of ore. The ground adjacent to the lode is very favourable, and if that continue there is no doubt of the lode producing copper. I gave the men on Saturday last 6*l.* per fathom for driving by the side of the lode, as the lode itself being hard to be wrought I consider it the most economical principle to drive by the side of the lode and take it down afterwards."

CADIANGULLONG.—During the month there have been sampled 86 tons of ore, ranging from 9 2-5ths to 17 per cent. for copper; average, 13½ per cent., and estimated to yield 11½ tons of fine copper. Considerable improvement in the prospects of the mine had manifested itself. Capt. Holman reports—"Phillips's Shaft: The only tutwork to notice in operation during the past month has been the sinking of this shaft a depth of 8 ft., making it altogether 16 ft. 6 in. sunk below the 26; and it gives me much pleasure to report that the lode below the slide immediately improved; it is now yielding fully 2 tons per

fathom, of 20 per cent. yellow ores, and if the shaft force were augmented to sink it with all practical dispatch, it now gives evidence that it would soon bring the mine into a prominent and remunerative position. I am, consequently, about increasing the sinking and stoping force here by six men, whose labour will cost much less in addition than the value of the ore they will raise, and greater expedition in developing this important point will be attained. A party of tributers sinking and stoping the lode west of Phillips's shaft, also below the 26, have in the past month raised upwards of 10 tons of rich yellow ores, estimated to average over 20 per cent. for copper. The other point of promise in the tribute department is on Clarke's lode, at Mitchell's and Wren's shafts, which is being prosecuted by six men, most of whom are earing wages at from 10s. to 11s. in 1*l*. At Lawson's shaft four men are also engaged, and only one man in the north section of the mine. Altogether this department has 13 men, and the staff on tutwork at Phillips's, when augmented, will be 10: total, 23 miners, which is only about three above the average of the past month. The return of copper ores for the ensuing sampling is estimated about the same as that now recorded, and the costs somewhat less.—Smelting Works: There had been sold at Sydney 15 tons of fine copper. There were in store there 19 tons, and about 14 tons in a state of forwardness at the works. Ore on hand, 25 tons; wood, 1065 tons."

ENGLISH AND AUSTRALIAN COPPER.—The stock of coals at Kooringa was 353 tons; at Kapunda, 63 tons; and at Port Adelaide, 757 tons. There were three melting furnaces, one roasting furnace, and one refinery, at work at Port Adelaide. Since last advices 100 tons of copper has been shipped.

SCOTTISH AUSTRALIAN.—The sales of coal from Lambton Colliery during October amounted to 12,639 tons. An arrangement had been come to amongst the colliery proprietors to raise the price of coal 1s. per ton.

AUSTRALIAN GOLD.—The receipts of gold from the Australian settlements have revived this year, having amounted in the eleven months ending Nov. 30 to 6,231,612*l*., as compared with 4,276,128*l*. in the corresponding period of 1865, and 2,629,766*l*. in the corresponding period of 1864. The contribution of the Australias to the general gold supplies of the year was about one-third—rather more than a fourth, and rather less than a third. The gold bearings of New South Wales and Victoria have declined in productibility of late years—at any rate, they have not been so effectively worked; but, on the other hand, New Zealand has contributed an unlooked for and important contingent of the precious metal. New Zealand being one of the Australian group of colonies, does not stand out by itself in the matter of gold production quite so prominently, perhaps, as it otherwise would; but its influence on the general yield of gold in the Australias is not the less decided and marked.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

PROSPER UNITED.—The 50, west of Hand's shaft, is worth 3 tons of copper ore per fathom, and is likely to open out a good run of productive ground; this is a new discovery, and the 60 and 70 are not yet into it. There was a breakage in the stamping-engine on Wednesday, but it was expected to be repaired and at work again by Saturday. The further rise in the standard this week still increases the value of this mine, which is likely to pay some good dividends this year. Shares are much below their value.

GREAT RETALLACK.—The prospects at this mine continue of the most encouraging character. The adit level has been driven 10 fms. upon a lode producing lead more or less for the entire distance, and the lode in the end at the present moment looks very promising for an early improvement. The back of the level is being stoped at 8s. per fm., and the agents hope to break a good pile of lead. A fortnight since we recommended the adventurers not to allow themselves to be frightened out of their shares. We repeat this caution. Various rumours will no doubt be circulated with a view to depreciate the mine, but the ore ground in the adit has lasted longer than was anticipated, and to all appearances a greater run may yet be calculated upon, whilst every fathom that is driven increases the chances for the next level. The shaft is down on the course of the lode about 2 fms. below the adit, and although it is 4 fathoms behind the point at which the lead was first met with in the adit, the lode is highly congenial for mineral, with fine stones of lead. The importance of the next level will be at once perceived; should lead be found there the shares will go to a high figure, and the adventurers will, therefore, act wisely to await the result. It will take about nine or ten weeks to sink 8 fms. deeper, but if the water will admit of the shaft being sunk until the engine is at work, the level may be reached in a much shorter time.

BRYNPOSTIG MINE.—The lode in the bottom, or 12 fathom level, never looked better; it is now worth 1½ ton per fathom. This end is now in advance by several fathoms of any ore ground seen in the adit level, which induces the manager (Capt. John Kitto) to think the main producing part of the lode is still standing whole to surface: this will soon be proved. On Tuesday 20 tons of lead ore were sold, which quantity might easily have been doubled if there were appliances for dressing the ore as fast as it could be raised. The dressing-floors, however, are being enlarged, so that larger returns may soon be expected. The 12 fm. level has been driven through upwards of 40 fathoms of good ore ground, which will stope at a considerable profit. The manager states that he has never in all his experience seen a more promising young mine.

A company is in process of formation for working mines situate in the northern districts of Portugal, principally on the confines of the River Douro, and bounded on the north by the River Minho. THE GREAT NORTHERN OF PORTUGAL MINING COMPANY (Limited) will have a capital of a quarter of a million sterling; and already several valuable concessions are being considered by the promoters.

DRAKE WALLS.—This mine is again opening up satisfactorily. During the depression in the price the resources of the property have been husbanded, and soon regular and progressive shares may be anticipated.

NORTH CROFTY.—One of the largest and finest courses of tin that has been opened out in any mine in Cornwall is being developed in this mine. When the new stamp-heads are erected, large and profitable returns will be realised.

THE PAH-RANAGAT LAKE SILVER MINING DISTRICT.—This district takes its name from a tribe of peaceable friendly Indians occupying it, and the mines are found 85 miles from Callville, the head of navigation on the Colorado River, accessible by wagon road. The mineral veins are conveniently situated for future mining operations. The valley lies between two ridges of mountains, which run nearly parallel, and is, from mountain to mountain, from 10 to 15 miles wide, and from 35 to 40 miles long. It lies in about latitude 37° 30′ north, and longitude 38° west from Washington. The course is from north-west to south-east. It is well watered, and the soil fertile. In the valley is a chain of small lakes, five in number. The water is clear and pure, and abounds with fish. This chain of lake extends from end to end of the valley. There are seven large springs in the valley, affording ample water-power for machinery, and a plentiful supply for irrigating purposes. The mines are in the west range of mountains, and are convenient to water and timber. An assay showed 7¼ grs. pure silver, and 1¾ grs. gold, from 3 ozs. of ore, which is exceedingly rich for top rock. The ledges are wide and well defined, varying from 1 to 5 ft. in width, and many of them traceable for half a mile. There appears to be little doubt that this is the far-famed "Silver Mountain," to find which so many expeditions have been fitted out since 1852. This district is from 75 to 100 miles from any now worked.

THE SHROPSHIRE MINING COMPANY.—This property is opening out excellent prospects. During the past week the lode in the engine-shaft has very much improved both in size and character, and is now worth 3 tons of good copper ore per fathom. There is also a good lode in Whittle's shaft, sinking below the 12 fm. level. The 12 fm. level, driving east into the hill, has also much improved. This is a most interesting mine, and one of considerable promise.

MINING AND ITS PROSPECTS.—(From Mr. Peter Watson's "Weekly Mining Circular and Share List," No. 406—Vol. ix., Jan. 11):—"Some weeks since, and before any decided improvement had taken place either in the Metal or the Mining Share Market, in reviewing the then position and prospects of mining as one of the most legitimate and profitable channels for the employment of capital, I stated that it was a singular circumstance, and one which, of course, could not be anything but purely accidental, that generally during periods of depression in metals there seems to be an absence of important discoveries and improvements in mines; but no sooner do metals improve than discoveries are made, and improvements ensue; and that it was 'to be hoped the year, the dawn of which we were rapidly approaching, would be as eminent for its mining successes as the present has been remarkable for its vexatious disappointments.' Although these remarks were based upon observation made during many years' experience, I am bound to confess that the steady improvement generally which has since taken place has exceeded my anticipations, in so far as its comparative suddenness is concerned, but its extent is as yet inconsiderable as compared with the unprecedented depression that had existed for many months past. Upon previous occasions I have shown that the metal market has not only been adversely affected by the general stagnation of commerce, but also by exceptional causes, not the least of which was the American war, the Southern States having been amongst our largest consumers of tin; and my opinions are now being realised—that as soon as our commerce began to assume a healthier tone the value of metals would at once respond to the improvement. From facts within my knowledge in connection with the metal trade, I have no hesitation in saying that, however severe has been the late depression, it will be succeeded by a period more marked for its activity. The standard for copper has this week again advanced 2½, and tin is very firm. There is a considerable amount of business being transacted in the market for mine shares, and prices continue to advance. The shares the purchase of which I have for some time past strongly recommended continue to be among those most eagerly sought after, either for speculation or investment, the result being a steady rise in their market value. Among the many shares now commanding attention, those to which I have for weeks past more particularly directed attention *I still strongly recommend.*"

IMPORTANT DECISION.—Mr. Bacon, Q.C. (instructed by Messrs. Harrison, Beale, and Co.), applied yesterday to disolve an injunction obtained by the official liquidator of the Wiltshire Iron Company (Limited), restraining the sheriff from proceeding to a sale of the company's property, seized on behalf of an execution creditor. Mr. Greene, Q.C., and Mr. Brooksbank (instructed by Mr. A. Pulbrook) opposed the motion. The Vice-Chancellor Stuart held that an execution creditor, who had levied before the presentation of the petition, notwithstanding he had neglected to proceed to a sale, was entitled to proceed, notwithstanding the winding-up order. Under the circumstances of the case, he should, however, not allowed the execution creditor his costs, as the official liquidator was right in having the matter brought forward.

COMPOSITION DEEDS.—In the case of Thompson *v.* Knight, it appeared that by a deed intended to take effect under the Bankruptcy Act, 1861, the debtor agreed to pay certain sums weekly to a trustee until the amount of a composition of 10s. in 1*l*. upon his debts was so paid, which sums the trustee was to hold in trust to pay the composition to the creditors in three equal instalments, at two, four, and six months. The deed contained a proviso by which the trustee, in cases where the composition did not exceed 10*l*., might, if he should think fit, pay the same in one sum, at such time or times as he should think fit. The Court of Exchequer held that this proviso created an inequality, and that the deed was, therefore, bad.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JAN. 11, 1867.

COPPER.	£	s.	d.
Best selected.....per ton	89	0	0
Tough cake and tile „	86	0	0
Sheathing and sheets „	91	0	0
Bolts ..... „	93	0	0
Bottoms..... „	96	0	0
Old (Exchange) .... „	77	0	0
Burra Burra ..... „	85	0	0
Wire.....per lb.	0	1	0½
Tubes ..... „	0	1	0

BRASS.	Per lb.
Sheets .....per lb.	10d.– —
Wire ..... „	9d.– —
Tubes ..... „	11d.– —
Yellow Metal Sheath. p. lb.	8½d.– —
Sheets ..... „	8½d.– —

SPELTER.	Per ton.		
Foreign on the spot £21 15 0–	22	0	0
„ to arrive.....	22	5	0

ZINC.			
In sheets	28	0	0

TIN.			
English blocks	89	0	0
Do., bars (in barrels)	90	0	0
Do., refined.....	92	0	0
Banca £85 10 0–	87	0	0
Straits	85	10	0

TIN-PLATES.*	Per box.		
IC Charcoal, 1st qua.	1 14 0–		—
IX Ditto, 1st quality	2 0 0–		—
IC Ditto, 2d quality..	1 10 0–		—
IX Ditto, 2d quality..	1 16 0–		—
IC Coke.....	1 4 6–	1 6	0
IX Ditto	1 10 6–	1 12	0
Canada plates, paton..	13 10 0–		—
Ditto, at works	12 10 0–		—

IRON.	Per ton.		
Bars Welsh, in London	6 15 0–		—
Ditto, to arrive	6 10 0–		—
Nail rods	7 0 0–	8 0	0
„ Staffd. in London	7 15 0–	8 10	0
Bars ditto	7 15 0–	9 10	0
Hoops ditto	8 15 0–	9 15	0
Sheets, single.....	9 10 0–11	0	0
Pig No. 1, in Wales ..	4 5 0–	4 10	0
Refined metal, ditto..	4 0 0–	5 0	0
Bars, common ditto..	5 10 0–	6 0	0
Do. mrch. Tyne or Tees	6 10 0–	—	
Do., railway, in Wales	5 5 0–	5 10	0
Do., Swed. in London.	10 5 0–10	10	0
To arrive	10 10 0–	—	
Pig, No. 1, in Clyde..	2 15 3–	3 6	6
Do. f.o.b. Tyne or Tees	2 9 6–	—	
Do. Nos. 3, 4, f.o.b. do.	2 6 6–	2 7	0
Railway chairs	5 10 0–	5 15	0
„ spikes 11	0 0–12	0	0
Indian Charcoal Pigs, in London p. ton..	7 0 0–	7 10	0

STEEL.	Per ton.		
Swed., in kegs (rolled)	14 0 0–	14 10	0
„ (hammered)	16 0 0–	16 10	0
Ditto, in faggots	16 10 0–	17 10	0
English, spring	19 0 0–	23 0	0
QUICKSILVER (p. bottle)	6 17 0–	7 0	0

LEAD.	Per ton.		
English Pig, com. 20	0 0–		—
Ditto, ordinary soft..20	5 0–20	10	0
Ditto WB) 22	15 0–		—
Ditto, sheet.....21	0 0–		—
Ditto, red lead 21	10 0		—
Ditto, white	27 0 0–30	0	0
Ditto, patent shot....23	0 0–		—
Spanish.....19	10 0–19	15	0

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The Metal Market continues to present a favourable appearance, and the improvement previously noticed still goes on, and business is now beginning to assume a much more active character than it has done for some time past. Buyers are now apparently desirous of executing some of the orders which had been previously kept back, while prices remain comparatively low, being fearful lest as business improves, and prices consequently again advance, they should be unable to do so at their limits. In the cases of several metals prices have already advanced, and are still looking upward; and there is now every prospect that ere long we shall see prices of a much more remunerative character than they have lately been. We look forward with much satisfaction to the future prospects of the metal trade, as we are convinced that as the year advances we shall find commercial affairs progressing very favourably; and there appears every reason to anticipate a good spring trade in metals. The intelligence received from America that the House of Representatives have passed the resolution for the impeachment of President Johnson, and that the Judiciary Committee are now examining the grounds for the same, is by no means satisfactory, as it will continue to preserve the unsettled state of matters there, which is very undesirable, as it must, more or less, act prejudicially on the commercial operations of the United States, and consequently prove injurious to the trade of this country, so far as concerns our transactions with America.

COPPER.—The market for this metal has been quiet during the week, and transactions have not been by any means extensive. There are still sellers under the official rates. Business has been done in Wallaroo at 85*l*., and in ore at 15s. per unit, and sales of Spanish have taken place at 78*l*.

IRON.—In Staffordshire, now that the reduction in prices has been decided, it is hoped that more specifications will be forthcoming. It is at present impossible to say what course will be pursued by the men; but as they have so long been getting only half wages, owing to the scarcity of orders, it is hardly thought likely they will enter upon a strike. After the reduction, wages will still be higher than they were for a long time prior to the sudden and transient improvement in the trade at the end of the year 1864. Until it is seen what course the men will take the trade will be in an uncertain position. In Welsh the trade is still dull. In consequence of a want of unanimity, the expected notice of a reduction in wages has not been given, and, therefore, the men continue to work under the old scale. The requirements of the home market are known to be heavy, and money is abundant, but still there is scarcely any business doing; the fact is, there is a great want of confidence, and makers are extremely cautious in not entering into speculative transactions. In the present depressed state of business on home account, sellers are naturally looking to the foreign markets, and it is satisfactory to be able to report that the prospects of trade with most of them are of an encouraging character, and there is no doubt that a fair share of orders from America, Canada, the East, Russia, and two or three of the markets of Southern Europe, will come to the Welsh makers. There is only a limited demand for pig-iron, while cold-blast makes being chiefly in request. In Swedish iron there has been much more activity, and several transactions have occurred. In Scotch pig there has been very little fluctuation during the week, and the market has generally been firm, at 54s. 9d. cash.

LEAD.—Operations have not been very extensive, and the market has remained rather quiet; prices, however, continue firm at the quotations.

TIN.—Foreign has continued to show a decided upward tendency, and business has been done in Straits at 86*l*. 10s. cash, 85*l*. 15s. one month, and 87*l*. prompt three months; while for arrival a parcel of about 40 tons, November shipment, has been sold at 86*l*. 10s. to 87*l*. cash on arrival. Banca in Holland continues to advance, and is now held for 51½ fls., buyers offering 51 fls. In English an advance of 2*l*. per ton has been announced by the smelters to-day, making present prices 89*l*. for blocks, 90*l*. for bars, and 92*l*. for refined.

SPELTER.—The market is not quite so firm, business having been done on the spot at 21*l*. 15s., but lately 100 tons for the end of February have sold at 22*l*. 5s.

TIN-PLATES.—If anything, there is a slight improvement in the demand, and the fact that makers at the quarterly meeting adopted the old prices shows confidence in the future.

STEEL.—No stock here at present.

QUICKSILVER may now be bought in quantities of 30 bottles and above at 6*l*. 17s.

THE TIN TRADE.—Messrs. Von Dadelszen and North (Jan. 5) write—For the future, as far as we are able to judge, the supply, both of Banca and Straits, seems likely to be less than that of last year; prices are not high, and would lead us to look for a satisfactory trade during the next three months, if not throughout the year. The next sale of Banca will be held in March, when between 80,000 and 90,000 slabs, it is expected, will be offered for sale. The English smelters on the 3d advanced tin 2*l*. officially, though it is an actual rise of 6*l*. on quotations ruling a short time previous. The quantity of tin here and in Holland on Dec. 31, 1866, was as follows, compared with the three preceding years:—

	1866.	1865.	1864.	1863.
	Slabs. Tons.	Slabs. Tons.	Slabs. Tons.	Slabs. Tons.
Stock in Holland....	130,399=4174 ..	96,859=3060 ..	66,907=2144 ..	75,538=2415
Arrived for next sale	64,534=2061 ..	93,770=2915 ..	49,404=2560 ..	52,996=1996
Billiton in Holland..	350	250	—	
Stock here	3459	2936	3650	2612
Total tons	10,044	9101	8854	6723

The quantity of tin now afloat for England is 711 tons, against 1528 tons last year, and to the Continent 22 tons.

THE COPPER TRADE.—Messrs. Vivian and Younger (Jan 11) write, after a meeting of the copper smelters yesterday, it was announced that the association, which was formed in July, 1865, had been dissolved. It is too soon yet to form any opinion as to whether prices will be materially affected by this very important movement. Throughout the week the market has been quiet, with but few transactions. Prices have changed but little; consumers and shippers still holding back. Chili slab is rather easier, with business done at 77*l*. A cargo of regulus was sold to a speculator at 15s. 3d., and a small business is reported in Burra at 86*l*.; Wallarroo at 85*l*., cash.

The standard for copper ore is again up 2½ this week, making altogether a rise of about 10*l*., equal to 12s. 6d. per ton on copper ore, a very important advance for mines selling many hundreds of tons monthly. White tin has also further advanced 3*l*., and the standard 2*l*., making a rise altogether of 7 in the standard, and 5*l*. on white tin. In the MINING SHARE MARKET great activity still prevails, and the mines mostly dealt in have been Retallack, North Crofty, Prince of Wales, Wheal Chiverton, Chiverton Moor, Chontales, Prosper United, West Chiverton, East Grenville, Drake Walls, West Frances, Wheal Buller, Wheal Trelawny, Marke Valley, Great Wheal Vor, East Lovell, East Carn Brea, Clifford Amalgamated, Treskerby, and a few other mines. West Chivertons have been much firmer and more dealt in, leaving off at 55½, 57½; the mine is looking well. Great Retallacks have also been extensively dealt in, and have advanced to 34s., 36s.; the lode in the adit end south is producing stones of lead, and the north end improving. North Croftys have advanced to 4¾, 5; Drake Walls, 15s. to 20s.; Carn Brea, 15 to 17½; Carn Camborne, 20s. to 25s.; Chontales, 2¾ to 3; Clifford Amalgamated, 9 to 9½; Cook's Kitchen, 10½ to 11; Chiverton Moor, 5¾ to 6. Prince of Wales have been largely dealt in at 27s. 6d. to 28s. 6d., leaving off 30s. to 31s.; the wall of the lode has been cut through at the 55 south, and the lode bored into 1 foot, and as far as can be discovered by the borer-hole will yield good work for copper; in a few days the lode will be cut through, and its value discovered; in the 45 east the lode continues rich, worth 20*l*. per fathom, and about 40 or 50 tons will be sampled this month. South Frances, 22 to 24; at the meeting held on Monday the accounts showed a loss on two months of 158*l*. 15s. 9d., and a balance against the company (after charging 450*l*. advance made to the solicitor in the lawsuit with West Basset several months ago) of 407*l*. 16s. 6d. This introduction of law costs, we believe almost for the first time, and so many months after it had been advanced, will take some shareholders by surprise; and we cannot help remarking that it would be more satisfactory to the out adventurers generally if some information were given them as to their exact position in regard to law costs, and what the ground which has cost them so dear is likely to yield them. The 134 fm. level, west of Pascoe's shaft, has improved, and for the last 5 fms. has been worth from 12*l*. to 20*l*. per fathom for tin; a rise above this is worth 20*l*. per fathom; other ends also have improved.

East Grenville, 2¾ to 2¾; the lode in the 95 west is worth 1¾ ton of copper ore per fm.; the winze below the 85 west is worth 4½ tons per fathom. East Lovell, 10 to 10½; the south lode, in the shaft below the 40 west, is worth 20*l*. per fathom in the eastern end, and 25*l*. to 30*l*. in the western end; the stope in the 40 west is worth 50*l*. per fathom; the eastern stope, in the back of the 40, is worth 40*l*. per fathom. The mine, the agent states, never looked better, and the lodes, in the aggregate, are worth 200*l*. per fathom, with every prospect of continuance. Great North Laxey, 1¾ to 1¾; the directors have made a call of 2s. 6d. per share; the lode in the shaft is worth 2 tons per fathom. The agent states that sinking the engine-shaft with the utmost speed, together with the driving of the bottom levels, are the great objects; and from below the 80 the shareholders may begin to look for results. It is, he said, a well-confirmed fact in the Isle of Man, that the small "shoots" or "pipes" of ore found above the sea level are only emanations from greater and remunerative bodies below, which, at the greatest depth yet ascertained in the Island, do not show the least signs of exhaustion, although already worked more than 220 fathoms deep. East Basset, 22¼ to 23¼; East Caradon, 6 to 6¼; East Carn Brea, 3 to 3¼; East Russell, 2 to 2¼; Great Laxey, 17 to 18; Great North Downs, 3¼ to 4; Great South Tolgus, 16s. to 18s.; Great Wheal Vor, 17½ to 18½; Marke Valley, 4¼ to 4¾. Grambler and St. Aubyn, 5 to 6; at the meeting the accounts showed a loss of 244*l*. 6s. 5d. on two months' working, and a balance against adventurers of 360*l*. 16s. 1d. The report states that, having several important points to be reached in the next few months, requiring but little outlay in addition to the returns, the agents think when they are proved the shareholders will be well repaid for the expenditure by the opening out of a profitable concern. Wheal Buller, 20 to 22½; the 80 east is worth 25*l*. per fathom; the winze, 50*l*. per fathom; the 80 west, 25*l*. per fathom. North Treskerby, 2¾ to 3; Prosper United, 3¾ to 4¼; Providence Mines, 28 to 30; South Caradon, 320 to 330; South Condurrow, 15s. to 20s.; South Grenville, 7s. to 9s.; St. Ives Consols, 8 to 9; Stray Park, 4 to 5; Tincroft, 13¼ to 13¾; West Caradon, 13¼ to 14¼; West Seton, 125 to 130; Wheal Basset, 70 to 75; Wheal Chiverton shares have advanced to 8¼, 9, and the mine improved; Wheal Grenville, 27s. to 29s.; Wheal Rose, 9 to 10; Wheal Seton, 130 to 135; Wheal Trelawny, 10 to 12; Wheal Uny, 35s. to 40s.

The Market for Mine Shares on the Stock Exchange during the week has been active, and the better class of British mines continue in favour. West Chiverton shares have been very largely dealt in, and command a ready market at 55½ to 56¼; the mine has improved in two very material parts—the 100 east, which is now in a good course of ore, and in the 80 west, which is valued at 40*l*. per fathom. In this level a course of ore has been opened up for something like 150 fathoms in length, a course of ore which for richness and length is without a parallel in Cornwall. Chiverton, 7 to 7¼; this mine is also improving. Chiverton Moor, 5 to 5¼; Great Laxey, 17¼ to 17¾. Clifford shares have not sustained the recent rapid rise. Great Wheal Vor shares are steady at the rise which has been established, 17¼ to 18¼. North Roskear shares have been dealt in at 6 to 7; the agents report that the mine is looking better in the bottom levels. There is plenty of room for improvement. North Crofty shares are firm at 4¼ to 4¾. Drake Walls have risen in the course of a few weeks from 6s. to ¾, 1; during the recent depression in the tin market the manager of this company wisely stopped their returns, and now they seem likely to be rewarded for their foresight. Most of the other mines sought by increased returns to cover themselves, and thus perpetuated the evil they were being ruined by. Westminster (Limited), 5 to 5¼; the discovery in the eastern part of the mine is likely to prove of great importance; already this part is drained for upwards of 40 fathoms in depth by the Deep Level Mining Company. The prospects are of a high order. In Foreign Mines there has not been much doing. St. John del Rey close 51¼ to 52¼; Chontales steady at ¼ dis. to par; Cape Copper, 1¾ to 2¼ prem.; Pestarena, ¼ dis. to par; Port Phillip, 13-16ths to 15-16ths; United Mexican, 1⅜ to 1¾; Vallanzasca, par to ¼ prem.; Don Pedro North del Rey, 3-16ths to 5-16ths prem.; Scottish Australian, ⅜ to ½.

IRISH MINE SHARE MARKET.—The dealings in Mining Shares have been quite brisk in comparison with other securities, and there is every indication of the market continuing good. The most prominent features in the quotations since last week's Journal are a fall of 1*l*. 10s. per share of the Mining Company of Ireland; and, on the other hand, a further advance in Wicklow Copper shares of about 1*l*. The former, which stood last week at 19*l*. to 19*l*. 10s. (7*l*. paid), are now obtainable at 18*l*. 15s.; the latter (Wicklow Copper, 2*l*. 10s. paid) were then in good demand at 23*l*. 10s., and are now in strong request at 24*l*. 7s. 6d. to 24*l*. 10s. Carysfort shares have been done at 2s. 6d., and those of the General Mining Company for Ireland at 2*l*. 15s. to 2*l*. 17s. 6d., and 3*l*. Connorree shares have improved from 14s. to 17s., and leave off in request.

The half-yearly general meeting of the Mining Company of Ireland was held on Jan. 3, at their offices in Dublin—Mr. Francis Codd (on the motion of Mr. Bewley) in the chair.—Mr. R. Heron (the secretary) read the directors' report and statement of accounts for the six months ending Nov. 30, from which we extract the following items:—Nett profit for the half-year, 5657. 16s. Knockmahon Copper Mines (co. Waterford), produced during that period 2780 tons of copper ore. The quantity shipped was 2878 tons, of the estimated value of 18,534*l*. Profit on the ores actually sold, 1941*l*. 10s. The Lnganure Lead Mines (county Wicklow) produced 813 tons of lead ore, being an increase of between 70 and 80 tons on the respective returns of the two preceding half-years. Quantity delivered to the company's Ballycorus Lead Smelting-Works, 803 tons; value, 9012*l*.; profit, 2133*l*. 3s. 9d. Ballycorus Works have given a profit of 2955*l*. 0s. 4d., including 700*l*., the estimated value of the flue-dust; and 90*l*. 4s. 10d., the balance now ascertained of the value of the same article for the half-year ended May last. The output of coal and culm at Slievardagh Colliery was 21,091 tons; sale, 25,637 tons; nett profit, 1671*l*. 19s. 2d. At Duhallow Colliery the output of coal and culm was 4803 tons, and sale 3190 tons, both being about double the figures of the corresponding period of the year 1865. The profit of 346*l*. 7s. 9d. has, as usual, been carried to

credit of the "new fittings" account. The Corrig Castle Mill account shows profits of 79*l.* 16s. 9d. on the working during the account half-year. A dividend at the rate of 8 per cent. per annum was recommended, and declared.

The Chairman, in his address, alluded at considerable length to the ill effects of the "financial crisis," unexampled in intensity and continuance in the memory of the oldest merchants of Ireland, and to the disappointment of all the most experienced men and firms engaged in, or conversant with, the copper trade in their expectation of the probable effect on the price of copper by the blockade of Chili. The blockade was inefficient, and large quantities of ore continued to arrive; so much so, that instead of the price of copper advancing it actually began to decline to an almost unprecedentedly low amount. Within the last few weeks, however, there were indications of an improvement in the copper market. What previously had been selling at 13s. 9d., 14s., and 14s. 3d. per unit had recently been sold at 15s., and the directors had just declined an offer of 14s. 9d. The company's present stock of copper ore was 8250 tons, which they had valued at 7*l.* 1s. 6d. per ton, or 14s. 6d. per unit, amounting to 58,390*l.* After deducting all charges for producing the entire stock, and sending it to market fit for smelting, which would amount together to 5200*l.*, their stock of copper ore would be left standing in their books at the nett value of 53,164*l.* It was, therefore, plain that every trifling advance on 14s. 6d. per unit would be a considerable profit to the company, less only such interest as might accrue for further holding back this stock. The policy of doing so was proved by the Chairman reading several letters from influential persons in England connected with the trade, confirming the view of the directors. The Chairman then read the reports of the mining captains, in whom he said the board placed implicit confidence, showing a general improvement during the last half-year. His reasons for so doing were—first, to give the shareholders the fullest information on the subject of the mines: and, secondly, because he understood that, unhappily, there had been for some time past an attempt made to introduce upon the Exchange of their city a system such as had in London and elsewhere led to the sacrifice of enormous property, and the destruction of many innocent families. In conclusive refutation of the calumnies spread for the purpose of depressing the market price of this company's shares, the Chairman made the following statement of their financial position:—They owed to the Royal Bank 32,900*l.*, with security but the high character of directors and the respectability of the company. They owed for supplies, 2275*l.*; for dividends, 1165*l.*; and for royalties, 95*l.* They did not charge for insurance fund, for they owed that to themselves. Of their debts amounted to 37,695*l.*, and to pay that they had in value in ore, coals, and in miscellaneous stock, 89,927*l.*, and they had debts due to them amounting to 11,560*l.*; so that they had 101,500*l.* to pay 37,600*l.*, leaving their floating capital of 60,000*l.* completely intact. For the above item of 11,560*l.*, 5,000*l.* includes 600*l.* odd due from Messrs. Edington and Son, Glasgow, whom the company is supplying with lead for the Varteg Waterworks, and who had agreed to a guaranteed composition of 11s. in 1*l.*, he (Mr. Codd) would give the company 19s. in 1*l.* In conclusion, the Chairman read Capt. Charles Thomas's summary on the company's mines, which in the most material points confirms their own captain's very favourable reports.

The Carysfort Mining Company also held a half-yearly meeting on Monday (Dr. J. P. Baxter in the chair). This being a mining property as yet but little developed, the report on the different points of working may be considerably condensed to suit our space. From the Chairman's account of the operations carried on, it appears that the directors obtained the services of a gentleman in the employment of the eminent and experienced firm of Messrs. Taylor and Sons, and that every statement he has made fully bears out the views of their own agent, Capt. Trelease, of whom the board of directors entertain implicit confidence. The captain's chief attention is now directed to a recent very important discovery of three distinct sulphur lodes near Arklow, the largest of which is about 43 feet wide from wall to wall, composed of gossan, capel, and quartz, impregnated throughout with sulphur. A shaft is being sunk on this lode, which, at 6 fathoms depth, produces stones of sulphur of a very good and promising character. To this point a steam-engine has been removed to unwater the mines. Of the company's finances it was said that of a loan obtained from the National Bank of 1000*l.* there are about 850*l.* left in hand. This would enable the company to continue their operations for three or four months, and the directors are sanguine that a good return will be secured before long.

At Redruth Ticketing, on Thursday, 1513 tons of ore were sold, realising 7083*l.* 5s. 6d. The particulars of the sale were:—Average standard, 110*l.* 7s.; average produce, 6¾; average price per ton, 4*l.* 14s.; quantity of fine copper, 101 tons 18 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Dec. 13....	1977	£102 19 0	6½	£3 19 0	12s. 2d.	£60 15 0
„ 20....	3390	103 0 0	6½	4 5 0	12 11	64 11 0
„ 27....	1906	102 18 0	7¼	4 14 6	13 0	65 0 0
Jan. 3....	2204	107 4 0	6¾	4 12 6	13 5	67 4 6
„ 10....	1513	110 7 0	6¾	4 14 0	13 10	69 10 0

Compared with last week's sale, the advance has been in the standard 2*l.* 5s., and in the price per ton of ore about 3s. Compared with the corresponding sale of last month, the advance has been in the standard 8*l.*, and in the price per ton of ore about 11s.

The Standards of Tin Ore were advanced yesterday 2s. per cwt., and are now as follows:—Common, 80s.; superior common, 81s.; fine, 82s.; superior fine, 83s.

At Cwm Erfin Mine meeting, on Wednesday, a further dividend of 1*l.* per share was declared. The mine has improved of late.

At Penhale Wheal Vor meeting, on Wednesday, the accounts for the three months to date showed a credit balance of 221*l.* 17s. 8d., and a balance of liabilities over assets of 1562*l.* 14s. 2d. The forfeiture of 320 shares belonging to 11 holders was resolved upon. A call of 7s. 6d. per share was made. Capts. Chappell and Martin reported upon the various points of operation. They have 32 hands employed.

At the Russian (Vyksounsky) Ironworks Company (special) meeting, yesterday (Mr. William Austin in the chair), the arrangements entered into for settling disputes between the company and dissentient shareholders were submitted, but a quorum not being present an adjournment took place.

On the Stock Exchange an active demand for Mining Shares has prevailed during the week. The following quotations were officially recorded in British Mining Shares:—East Caradon, 6¼; Great Laxey, 17¾, 18¼, 17⅞; North Wheal Crofty, 4¼, 4¼; South Condurrow, ⅞; West Caradon, 13¼; West Chiverton, 55½, 56; Great Wheal Vor, 18⅞, 18½; Prosper United, 3⅞; Drake Walls, ⅞, ⅞, ⅞, 1; Great South Tolgus, ½; Tincroft, 13½, 13, 14, 13½.—In Colonial Mining Shares the prices were:—Yudanamutana, 1½, 17. 11s. 3d., 1⅛, 1⅛, 1⅛; Cape, 9; General, 21.—In Foreign Mining Shares the prices were:—Chontales, 3 1-16, 3 15-16, 3, 2⅞; Cobre, ¾; Panulcillo, 3½; St. John del Rey, 53, 53¾, 53½, 52, 53, 52, 51¾; Frontino and Bolivia, 7-16; United Mexican, 1¼; Pontgibaud, 7½, 7¾; Pestarena, 2.

COAL MARKET.—Only 44 fresh ships arrived during the whole week, nearly all screw steamers. In the early part of the week the return to mild weather produced dulness in the market for house coals, and prices declined 6d. To-day, on the colder temperature, and the stormy weather preventing sailings of any kind from the Northern ports, a complete change took place, and the whole of the house coals were cleared off at an advance of from 6d. to 1s. per ton. Hartley's scarcely varied in price from last week. Haswell Wallsend, 23s.; Tees Wallsend, 23s.; South Hartlepool Wallsend, 21s. 6d.; Hetton Lyon's Wallsend, 20s. 6d.; Tunstall Wallsend, 20s. 6d. per ton. Unsold, 1; at sea, 5 ships.

ABERAMAN IRONWORKS COMPANY.—Since the appointment of the Defence Committee a large number of the allottees have forwarded subscriptions. Mr. A. Pulbrook, in a circular issued to the shareholders, states that the strong support awarded to the committee has encouraged it to initiate the necessary proceedings to carry out the object for which it was formed, and accordingly applications have already been made to the Court on behalf of all those gentlemen who have subscribed for the removal of their names from the list of contributories.

Creditors of the Wiltshire Iron Company (Limited) are required to send the particulars of their claims to Mr. H. T. Edwards, the official liquidator, by Feb. 1.

Mr. C. F. Kemp, the liquidator of the South Cornwall Mining Company (Limited), has appointed the 11th inst. to settle the list of contributories. Creditors are required to send the particulars of their claims to Mr. Kemp by the 19th instant.

COMBINED HEMP ROPE.—Although considerably less hempen rope has been employed since the introduction of wire rope than formerly, the demand for it is by no means unimportant, and, as in all commercial affairs, the production of a first-rate article at a low price is the best means of securing a good position in the market. Messrs. GLAHOLM and ROBSON, of Sunderland, who have long enjoyed a high reputation as manufacturers of steel and iron wire-ropes, for mining, agricultural, and shipping purposes, have for some time past given their attention to a new rope, which has proved itself by extended trials to thoroughly justify the anticipations that had been formed of it. The patent combination Russian and Manilla hemp rope, of which Messrs. Glaholm and Robson are the sole manufacturers, is found to last thrice as long as ordinary Russian rope, and no doubt is entertained that when the rope becomes generally known it will supersede the other kind. A piece of the new rope, which has been used on the *Medusa* for 3½ years in the Indian trade, has been sent to the *Mining Journal* office, and it really appears almost as good as ever, whilst twelve months is the time usually allowed for an ordinary rope in a similar position. A piece from a rope used for driving machinery in the manufacturers' own works for seven months is also sent. It is 44 per cent. lighter than the Russian rope previously used, and which lasted from 3 to 3½ months doing the same work. When they used the patent rope the same size as the Russian it lasted under similar circumstances 10 months. A portion of the yarns in this rope being untarred, it is pliable, strong, and light. For incline and flat pit-ropes it is especially valuable: a pair of these flat ropes have been working on one of Lord Lonsdale's Whitehaven collieries four months longer, it is said, than the old ropes ever did, although only weighing 8 lbs. per yard, while the others were 10 lbs. The Hetton Colliery owners put them on the ends of their incline ropes, and from the elastic nature of the materials they last thrice as long as ordinary rope. The new ropes have now stood the test of several years' actual use, and in every case have given entire satisfaction.

MANUFACTURE OF IRON AND STEEL.—The invention which has been patented by Mr. H. K. YORK, of Grange Town Ironworks, Cardiff, consists in purifying the iron, so as to facilitate its conversion into malleable iron or steel. He cuts the pig-iron previously heated into small particles, by means of circular saws, or tears and crumbles it by any suitable apparatus, and then exposes the hot particles to the oxidising influence of a blast of air. The particles of iron thus obtained are treated for malleable iron, by being charged in a reverberatory furnace, and balled up at a welding heat. These balls are then shingled and rolled in the ordinary way. For the production of steel, the iron particles are simply melted down, with or without the addition of flux. The small particles of iron may also be chemically treated, by allowing them to fall whilst heated into water containing chemicals in solution.

MANUFACTURE OF STEEL AND IRON.—It is well known that in the manufacture of steel and iron by the Bessemer process it is difficult to separate phosphorus from the metal; Mr. WARREN DE LA RUE has, therefore, patented an invention which consists in the introduction of lead, or compounds of lead, into the converting vessel, so that the same may be thoroughly diffused amongst the fluid metal therein; thus, the phosphorus is separated from its combination with the iron. If metallic lead be employed, it is introduced in a molten state (in proportions considerably greater than would be required by theory to combine with the quantity of the phosphorus contained in the metal to be acted upon) directly into the converting vessel, and the blast continued with the object of oxidising the lead and the phosphorus. When metallic lead is employed, it should be introduced as soon as the blast has been turned into the converting vessel. If compounds of lead are used, it is convenient to cause them to enter with the blast in the state of powder, by placing them in a funnel-shapped vessel, which may be closed air-tight, and in which there is a provision for communicating (both at the top and bottom of the vessel) with the blast-pipe, the powder is caused to fall by means of a tappet motion, or otherwise, to cause a vibration in the vessel and its contents, and the feed is regulated by a suitable slide, which will open and close at will. Peroxide of lead, red lead, litharge, nitrate of lead, are convenient to employ, but he does not restrict himself to the use of these oxy-compounds, as other compounds may be used; but in all cases he uses the lead, or compounds of lead, in comination with the blast in the converting vessel of the Bessemer process.

THE IRON TRADE.—In confirmation of the views expressed in the *Mining Journal*, that the British iron trade need have no thought of permanent competition in Belgium, it is only necessary to refer to the statement in our usual weekly report on Foreign Mining and Metallurgy, which shows that some extensive Belgian contracts for railway axles have been obtained by five English firms, at prices ranging from 10*l.* 16s. 8d. to 12*l.*

LOW'S PATENT ROCK-BORING MACHINE.—In the *Mining Journal* of next week will be published an account of the actual performance of two of Low's Boring-Machines before the Roundwood Tunnel was completed. Two of these machines have been at work day and night for upwards of a year, and required no repairs or renewal of any part whatever, thus showing the very great advantage of the patent air-cushion introduced by Mr. Low to prevent the crystallisation of working parts, resulting from the very rapid percussion of the tool as many as 350 blows per minute, and also in having all the working parts protected from the quartz dust, together with other improvements.

RIGHTLY PUNISHED.—Joseph Slater, a colliery deputy, was charged before the magistrates at Bishop Auckland with having endangered the safety of Spenny Moor Colliery, by exhibiting a naked light in the pit. The charge was proved, and it was stated that there were upwards of 100 men and boys in the pit at the time the light was exhibited. The Bench fined the defendant 2*l.*, or one month's imprisonment. Several of the workmen had refused to go into the pit if the defendant was allowed to act in the same capacity as he had done.

India Office—Contract for Copper Slips.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL.

NOTICE IS HEREBY GIVEN that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before Monday, the 14th instant, to RECEIVE PROPOSALS, in writing, sealed up, from such persons as may be willing to SUPPLY—

FIFTY TONS OF COPPER SLIPS.

And that the conditions of the said contract may be had on application at the India Store Office, Canon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M., of the said 14th day of January, 1867, after which hour no tender will be received.

GERALD C. TALBOT, Director-General.

India Office, January 8, 1867.

EDUCATION IN COLLIERY ENGINEERING, MINERAL SURVEYING, &c.—Mr. M. GILDROY STEWART, M.E., SHETLAND HOUSE, WARMLEY, near BRISTOL, has at present VACANCIES for TWO or THREE PUPILS. Terms very moderate.

WANTED, an OFFER for 20 West Maria and Fortescue, 20 East Holyford, 290 Okehampton, 15 South Callington, and 37 Clifford Amalgamated.—Apply to "Accountant," MINING JOURNAL office, 26, Fleet-street, London, E.C.

MESSRS. R. C. CLIFTON AND CO., SHAREBROKERS, ALDINE CHAMBERS, PRINCESS STREET, MANCHESTER.
Mines inspected, and reports furnished. The best practical advice given to capitalists as to investments in mining,
Bankers: National Provincial Bank, Manchester.

SHAREHOLDERS IN PUBLIC COMPANIES desirous of avoiding calls and further responsibility will find purchasers on applying to Messrs. BARRETT AND CO., 78, LOMBARD STREET, CITY, and No. 20, SPRING GARDENS, CHARING CROSS. Stocks, shares, mining, and other miscellaneous securities bought and sold. Investment Review on application. Cash advances made.

ROBERT LIBBY AND SON,
MINE AND SHAREDEALERS,
CAMBORNE, CORNWALL.

GUIDE TO INVESTORS.—Mr. SPARGO'S "Guide to Investors" for the present month contains a tabulated statement of Banking, Mining, and other Companies, showing the depreciation in value during the last twelve months; and a price list of shares in Banks, Canals, Railways, Bridges, and Finance Companies up to Tuesday, the 8th instant. It also contains articles on "Bulls and Bears," and their effects; Retrospect of 1866, and Prospects of 1867; the Revenue, our Position and Prospects; the Mine and the Rail; with necessary detailed information connected with the Stock and Share Markets, Mines, and Miscellaneous Companies.
224 and 225, Gresham House, Old Broad-street, London, E.C.

BRITISH AND FOREIGN INVESTMENT.—MR. THOMAS SPARGO, STOCK, SHARE, AND MINING BROKER, 224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., TRANSACTS EVERY DESCRIPTION OF BUSINESS in the PURCHASE and SALE of SHARES in BANKS, CANALS, MINES, RAILWAYS, BRIDGES, INSURANCES, and ALL OTHER DESCRIPTIONS of BRITISH and FOREIGN STOCK.

Mr. SPARGO has for sale shares in English mines paying from 12 to 20 per cent. upon the present price, in bi-monthly and quarterly dividends, as also a number of shares in good progressive mines, some of which he with confidence specially recommends to the public as sound investments.

Mr. SPARGO gives every information as to position and prospects of all mining undertakings, upon application, either personally or by letter, and is enabled, through his long experience, aided by his monthly visits to Cornwall, Devon, and Wales, to obtain the most reliable information as to the numerous mines in those districts. He will at all times give the best advice as to investments in mines, and, if necessary, inspect them himself; as in all cases he wishes to be guided by the intrinsic value of the property. Upon the receipt of 5s. he will furnish a selected list of dividend and progressive companies.

Mr. SPARGO has published the following works, viz.:—
Statistics and Observations upon the Mines of Cornwall and Devon, 1859—2s. 6d.
Ditto ditto ditto 1860, price 2s. 6d.
Ditto ditto ditto 1862, price 5s.
Ditto ditto ditto 1864, price 5s.
Ditto ditto ditto 1865, price 5s.

Physical, Geological, and Parish Map of Cornwall. Scale, three miles to an inch. Printed in three colours, showing distinctly the mining districts, the height of the hills, &c. Price 10s. 6d., on cloth and rollers.

Geological Maps of the various mining districts, showing the boundary line of each mine, with the lodes, cross-courses, and elvan courses by which it is traversed. Price 2s. 6d. each.

A Model, or Relief, Map of Cornwall (6 ft. 6 in. by 5 ft), presenting the names of every town and village, as also every characteristic point of the county. Price £5 5s.

Dividends received, calls paid, and all orders promptly negociated.
Commission 1¼ per cent.

Mr. SPARGO has 20 years' experience of mining, ten of which he was engaged in practical mining, and ten years he has transacted business in mining shares and stock, at 224 and 225, Gresham House, Old Broad-street, City, E.C.
Mr. SPARGO'S Statistics for 1866 are now ready.
Bankers: Metropolitan and Provincial Bank (Limited).

MR. CHARLES BAWDEN, POLDICE, ST. DAY, SCORRIER, CORNWALL, begs respectfully to inform his friends and the public that, in addition to his Mining Business, he has commenced that of an AUCTIONEER and APPRAISER, and any sales entrusted to him shall receive his careful attention. Mr. CHARLES BAWDEN'S long connection with the Mines of Devon and Cornwall, in the purchase and sale of materials, specially qualifies him for the valuation of all kinds of Mining Machinery, &c.

AMERICAN JOURNAL OF SCIENCE AND ARTS, published by Profs. SILLIMAN and DANA (aided editorially by Profs. Gray, Agassiz, Gibbs, Johnson, Brush, and Newton), at New Haven, Connecticut, every other month, commencing each year with January, in numbers of 140 pages each, making two volumes a year. Now in its forty-eighth year. The ninety-second volume (or forty-second volume of second series) commences on July 1, 1866. Messrs. Trübner and Co., 60, Paternoster-row, London, agents.

In Chancery.

IN the MATTER of the COMPANIES ACT, 1862, and in the MATTER of the WILTSHIRE IRON COMPANY (LIMITED).—The Vice-Chancellor Sir John Stuart has by an Order, dated the 29th day of Nov., 1866, APPOINTED HENRY THRELKELD EDWARDS, of No. 18, King-street, Cheapside, in the City of London, to be OFFICIAL LIQUIDATOR of the above-named Company. ROBT. WM. PEAKE, Chief Clerk.
ANTHONY PULBROOK, of No, 28, Threadneedle-street, in the City of London, Solicitor to the Official Liquidator.
Dated this 22d day of December, 1866.

In Chancery.

IN the MATTER of the COMPANIES ACT, 1862, and of the WILTSHIRE IRON COMPANY (LIMITED).—The CREDITORS of the ABOVE-NAMED COMPANY are REQUIRED, on or before the 1st day of February, 1867, to SEND THEIR NAMES and ADDRESSES and the PARTICULARS of THEIR DEBTS or CLAIMS, and the names and addresses of their solicitors (if any) to Henry Threlkeld Edwards, of No. 18, King-street, Cheapside, in the City of London, Official Liquidator of the said company, and if so required by notice in writing, are by their solicitors to COME IN and PROVE THEIR said DEBTS or CLAIMS at the Chambers of the Vice-Chancellor Sir John Stuart, No. 13, Old-square, Lincoln's Inn, in the county of Middlesex, at such time as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved. Friday, the 15th day of February, 1867, at Twelve o'clock at noon, at the said chambers, is appointed for hearing and adjudicating upon the debts and claims.
Dated this 22d day of December, 1866.

R. W. PEAKE, Chief Clerk.
ANTHONY PULBROOK, No, 28, Threadneedle-street, in the City of London, Solicitor for the Official Liquidator.

IN LIQUIDATION.

IN the MATTER of the COMPANIES ACT, 1862, and in the MATTER of the SOUTH CORNWALL MINING COMPANY (LIMITED). —NOTICE TO CREDITORS.—The CREDITORS of the ABOVE-NAMED COMPANY are REQUIRED, on or before the 19th day of January, 1867, to SEND IN THEIR NAMES and ADDRESSES, and the PARTICULARS of THEIR DEBTS or CLAIMS, to Mr. Charles Fitch Kemp, the liquidator of the said company, at the office of the said liquidator at No. 8, Walbrook, in the City of London, and if so required by notice in writing from the said liquidator, to COME IN and PROVE THEIR DEBTS or CLAIMS at the said office of the said liquidator at such times as shall be specified in such notice, or in default whereof they will be excluded from the benefit of any distribution to be made before such particulars are so delivered.
LINKLATERS, HACKWOOD, AND ADDISON, Solicitors to the Liquidator, 7, Walbrook, London.
Dated this 7th day of January, 1867.

EAST HOLYFORD MINE.—It being persistently stated, contrary to my wish, that I am, or was, connected with East Holyford Mine, I hereby give notice such is not the case, as I am NEITHER SHAREHOLDER or DIRECTOR of ANY MINE.
THOMAS MACNALLY, Clerk.
31, Trinity College, and 4, Wesley-place, Dublin.

LEAD ORES.

Date.	Mines.	Tons.	Amount.	Purchasers.
Dec. 20—	Isle of Islay	56	£13 0 0	Shield and Dinning.
29—	Prince Arthur Consols.	53	14 0 6	Stock and Co.
Jan. 4—	Great Laxey	100	23 1 6	A. Eyton.
—	Minera	100	12 15 6	Walker, Parker, & Co.
—	ditto	100	12 15 6	ditto
—	ditto	65	12 15 6	ditto
—	ditto	104	12 16 6	A. Eyton.
—	ditto	96	12 16 0	Panther Company.
—	Cae-conroy	30	13 11 0	—
8—	Brynpostig	26	12 5 6	A. Eyton.
10—	Talargoch	31½	13 8 6	Walker, Parker, & Co.
—	ditto	31¼	13 8 6	A. Eyton.
—	ditto	67½	13 13 6	ditto
—	ditto	67½	13 16 6	Walker. Parker, & Co.
—	Bryngwyn	35	13 1 0	ditto
—	ditto	7	12 3 6	ditto
—	ditto	6	15 5 6	ditto
—	Trelogan	10	13 1 0	A. Eyton.
—	ditto	10	13 1 0	Walker, Parker, & Co.
—	Parry's	9	12 7 6	ditto
—	Westminster	20	11 13 6	ditto
—	Pool Park	15	12 16 6	ditto
—	North Henblas	12	11 0 6	ditto
—	Mount Pleasant	4	11 11 0	ditto
—	ditto	4	11 11 0	A. Eyton.
—	ditto	2	15 5 6	Walker, Parker, & Co.
—	Summer Hill	2	15 5 6	ditto
—	ditto	10	11 2 6	ditto
—	Dyliffe	70	12 8 6	ditto
—	ditto	64	12 6 6	ditto
—	ditto	48	12 8 6	A. Eyton.
—	Dyfngwm	6	11 12 6	ditto
—	ditto	6	11 12 6	Walker, Parker, & Co.
—	Pant Du	10	11 11 0	A. Eyton.
—	Frank Mills	40	15 1 0	Bury Port.
—	ditto	60	12 16 0	Treffry Estate.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 4—	Minera	104	£ 4 7 0	Vivian and Sons.
—	ditto	29	2 6 6	ditto
—	ditto	73	4 3 6	ditto
—	ditto	60	4 0 0	ditto
—	ditto	16	4 3 6	ditto
8—	Gronant	50	5 2 6	Kenrick and Son.
—	Pool Park	5	3 17 6	ditto

BLACK TIN.

Date.	Mines.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchasers
Jan. 3—	East Providence	4 11 0 19	—	£ 230 4 0	—
8—	Pedn-an-drea	5 19 2 4	—	298 13 10	Carvedras.

COPPER ORES.

Sampled Dec. 26, and sold at Tabb's Hotel, Redruth, Jan. 10.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Prosper United	95	£1 8 6	East Rosewarne	29	£4 19 6
ditto	60	2 14 6	ditto	25	3 13 0
ditto	54	5 15 6	ditto	24	6 4 6
ditto	52	5 15 6	Camborne Vean	38	1 19 6
ditto	51	3 16 6	ditto	30	1 17 6
ditto	48	4 4 6	ditto	29	6 19 6
ditto	47	4 0 0	ditto	24	3 17 6
ditto	3	22 16 0	Wheal Margery	56	2 2 6
East Carn Brea	65	4 3 0	ditto	53	4 15 0
ditto	61	6 9 6	Copper Hill	66	4 19 6
ditto	40	1 19 0	ditto	42	0 17 6
ditto	32	3 4 0	Botallack	44	12 5 6
ditto	24	5 9 6	ditto	28	11 16 0
West Basset	56	3 4 6	ditto	24	10 1 6
ditto	51	8 7 0	Wheal Buller	30	1 18 6
ditto	41	4 3 0	ditto	14	7 16 6
ditto	40	5 9 6	ditto	8	1 16 0
ditto	30	3 12 6	Pendeen Consols	14	8 4 0
East Rosewarne	46	6 10 6	ditto	7	4 4 0
ditto	38	8 4 6			

TOTAL PRODUCE.

Prosper United	410	£1565 6 0	Wheal Margery	109	£ 370 15 6
East Carn Brea	222	854 10 6	Copper Hill	108	365 2 0
West Basset	218	1104 7 0	Botallack	96	1112 6 0
East Rosewarne	156	958 9 6	Wheal Buller	52	181 14 0
Camborne Vean	121	426 11 6	Pendeen Con.	21	144 4 0

Average Standard ..... £110 7 0 | Average Produce 6¾
Average Price per ton £4 14 0
Quantity of Ore.....1513 tons | Quantity of Fine Copper, 101 tons 18 cwts.
Amount of Money ..... £ 7083 5 6
LAST SALE.—Average Standard..... £107 4 0.—Average Produce.....6⅞
Standard of corresponding sale last month, £102 19 0.—Produce, 6½.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	377½	£1514 2 2
Freeman and Co.	90	553 4 6
Grenfell and Sons	219¾	904 13 8
Sims, Willyams, and Co.	179½	647 1 0
Williams, Foster, and Co.	162⅔	1237 12 8
Mason and Elkington	106	396 17 0
Copper Miners' Company	101	350 19 6
Newton, Keates, and Co.	65	269 15 0
Sweetland, Tuttle, & Co.	212	1209 0 0
Total	1513	£ 7083 5 6

Copper ores for sale at the Royal Hotel, Truro, on Thursday next.—Mine and Parcels.—Devon Great Consols 1416—Marke Valley 450—Hingston Down 400—East Caradon 300—Devon and Cornwall 260—Wheal Friendship 205—Wheal Emma 161—East Russell 107—Bedford United 94—West Maria and Fortescue 60—Crelake 50—Caradon Consols 38—Fursdon 26—Wheal Mary Florence 20—Holmbush 13.—Total, 3609 tons.

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday week.—Mines and Parcels.—South Caradon 498—Clifford 341—North Treskerby 320—Wheal Rose 305—Phœnix 117—West Caradon 153—Craddock Moor 80—Great Wheal Busy 25.—Total, 1873 tons.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Jan. 6 was 3738*l.* 13s. 2d.

WATSON AND CUELL'S MINING CIRCULAR

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON AND CUELL having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and the state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON and CUELL have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON and CUELL they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON and CUELL transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON and CUELL also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON and CUELL are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON and CUELL having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

"NOVICE" (Cheltenham).—If our correspondent, who is new to mining, will refer to back numbers of the *Mining Journal* he will find the "Cost-Book System," upon which most mines are conducted, fully explained. It is a mutual partnership, under which meetings must be held two-monthly or quarterly, and full statements of affairs laid before them. At these meetings the shareholders themselves audit the accounts, and make calls for any deficiency. By this means, if the affairs are properly carried out, no debts should accrue, and any shareholder may learn what position he is in. A shareholder may also at any time retire from the company on giving notice to his co-adventurers of his intention to do so, and by paying up his proportion of debts up to the date of his relinquishment. Shares can only be forfeited when there is a special rule in the cost-book—which has been assented to by all—for the purpose. For this reason rules are entered in the cost-book, and then signed by *all* the original shareholders, and others who become shareholders through transfer, accept the shares "subject to the rules," &c.

"AN OLD FRIEND" (——) is quite right in saying we cannot be expected to answer anonymous letters, but we have no hesitation, in the instance ref rred to, in stating that, so far from saying anything against the management of North Treskerby, we have in the Circular spoken in the *highest terms of it*, and are, besides, *large shareholders in the mine*. Some of our friends were disappointed in not getting a dividend, which, from the nature of the reports, they thought they were justified in expecting, and expressed a wish that a little more ore should be returned. In reference to Grenville and East Grenville, we are not even on the finance committee of the latter, and have about as much to do with the underground working of Grenville as the "Man in the Moon." We have had a large stake in it for years, and bought as high as 10*l.* per share, and when shareholders were backward with calls for several years we advanced money monthly to meet the costs. Our treasurership to mines has been mostly of this kind, and we should be only too happy if any bank would take them all, and make the necessary advances. Had tin kept its price, Grenville would have done all that one of the first practical agents in Cornwall said it was capable of doing, and there are many mines we could point out which were more highly extolled two years ago than Grenville, and at higher prices, that are not even to be found in the list now, but we do not like to be invidious. We have never pretended to be practical miners, or to interfere in underground works. We rely on the soundest opinions we can get, and when results have been so totally at variance with what we have been led to expect, we have always been unwilling to accuse agents either of ignorance or dishonesty, as experience has shown us that the best judgments are often at fault in mining.

"B. B." (Bath).—1, 2, and 4 are good; 3 we know very little about.

"X."—We referred to the probable rise in West Frances a few weeks back. Buller is far below its value, in our opinion. The mine looks better than when shares were at 40*l.*, and tin is advancing. One of these days they will take a turn.

"J. W. T." (Forest Gate.)—Central Minera at one time had good prospects, but one or two points do not appear to have turned out as expected. Of the present position of the mine we are unable to speak; but our correspondent, if a large holder, should have the mine inspected.

"T. M."—We believe there is no truth whatever in the report that the large holders of West Chiverton are selling, and it must have been circulated for a purpose. We have had the mine inspected, and may give the heads of the report next week, and will also answer the enquiry about East Wheal Rose and its early history.

"A SHAREHOLDER."—Too late to answer this week.

"RETALLACK."—To support the resolution, a copy of which has been sent to each shareholder, and for any other purpose that may be thought conducive to the welfare of the mine, we shall be happy to receive proxies from those shareholders who may not be able to attend the meeting. We will send a form to be signed on hearing from those who cannot attend, and will trust their interests to our care.

COAL AND COAL MINING.

The great interest at present attaching to everything connected with collieries renders the appearance of the admirable little volume on the subject, by Prof. WARINGTON SMYTH,* whose position as Chief Inspector of the Mines of the Crown, and of the Duchy of Cornwall, entitles his opinion to every consideration, particularly opportune. The object has been to supply an elementary account of coal, and the modes of working it, and raising it from the pits. There is also a chapter on the probable duration of our coal fields, founded on statistical facts and the personal observation of the author, and containing a most impartial review of the subject. It seems, says Mr. Smyth, that in 20 years, ending 1860, the quantity of coal raised in Great Britain was more than doubled; but are we thence justified in believing that in the next following 20 years it will be again doubled, and so on in geometrical progression? He thinks the assumption is based on a fallacy, and that although the numbers for certain years appeared to fit such a conclusion, the increase to our production of from 2,000,000 to 3,000,000 tons annually, serious as it undoubtedly is, will keep us within comparatively moderate figures for a long time to come, and at all events defer, as regards the country at large, the evil day for two or three centuries.

Prof. Smyth considers, in the first chapter, "The Use of Coal: its Commencement and Extension," carefully tracing its history from the time of Theophrastus to the present time, when our yield approaches 100,000,000 tons in the year. To enable the reader to comprehend the vast quantity represented by these figures a few comparisons are given, which are not uninteresting. Estimating 1 ton to the cubic yard, the coal raised last year would form a column 5229 ft. in height, and with a base 11 acres in extent. Or, taking the distance from London to Edinburgh, 400 miles, the same quantity would build a wall the whole way of 12 ft. thick, and 99 ft. high. The "Mode of Occurrence of Coal" is next treated of, and then the "Organic Remains and Origin of Coal; this chapter is well illustrated by diagrams of the characteristic fossils. The next half-dozen chapters are devoted to the consideration of the various coal fields, and there is then an interesting chapter on the "Search for Coal, Boring, and Sinking of Shafts," the remaining chapters treating of the technical details of coal mining after the shafts are sunk. Commencing with the driving of levels, he furnishes concise and useful accounts of pillar and stall, and long work, conveyance underground, raising the mineral in the shafts, drainage and pumping, lighting of the workings, ventilation, and of colliery accidents and their prevention. The book, as a whole, contains an enormous amount of really useful practical information, conveyed in a popular and interesting manner, and the careful perusal of it will afford the non-professional reader such an insight into the facts and difficulties connected with colliery workings as will enable him to comprehend general arguments on the subject, and to avoid the making of suggestions which, in practice, are either old or worthless. The work cannot fail to find a large class of readers.

* "A Treatise on Coal and Coal Mining." By WARINGTON W. SMYTH, M.A., F.R.S., Pres. G.S., &c. London: Virtue Brothers.

ENGINEERS', ARCHITECTS', AND CONTRACTORS' POCKET-BOOK.—Since this admirable annual, so long published by the late Mr. John Weale, has been in the hands of Messrs. Lockwood and Co. it has well maintained its character, and the edition just issued for the current year is fully equal to any that has preceded it. The obituary, which is unfortunately larger than usual, includes the names of Capt. Fowke, Mr. Nicholas Wood, Sir E. Eastlake, Mr. John Gibson, Dr. Dauglish, Mr. David Elder, Prof. Whewell, Dr. Petrie, Mr. George Rennie, Mr. Charles Wye Williams, and Mr. William Gravatt. The lists of the officers and members of the several societies connected with the professions for which the book is intended have been corrected to the latest date.

ADCOCK'S ENGINEERS' POCKET-BOOK.—The edition of this well-known pocket-book has just been issued for 1867; it contains the information which has so long secured it the support of practical men.

AGE OF THE CHINESE COAL FIELDS.—It will possibly surprise some of our readers to learn that the greater part of the Chinese coal fields belongs to the Mezozoic period. This has recently been demonstrated in the *American Journal of Science;* the author of the article having received several specimens of the Chinese coal fossils, has been enabled to determine that all the carboniferous fossils are absent, and that most of the plants present are Podozamites and Pterozamites, which are essentially Cycads.—*Popular Science Review.*

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

ACCIDENTS IN COLLIERIES.—As the late fatal calamities at Pelton Fell, Little Hulton, and Barnsley have cast a gloom over the country, and as these occurrences can easily be prevented, provided the proper means be applied, I beg leave to state that I have had in my possession since the Hartley disaster plans and a model verifying the efficiency of my system to clear the mine of the fatal gas, as well as to supply it with pure and fresh air, which is the great desideratum. It is melancholy to think that at this stage of England's intellectual progress so many lives should be sacrificed, when the means to prevent it are so easily attainable. I am prepared, in the face of all opposition, to prove the efficiency of my plan, having fully investigated the principle of its construction, and verified the practicability of introducing it by experiment. I am satisfied that my plan would do much to prevent the fearful sacrifice of life now so frequent.—JOHN SHORT: *West Hartlepool.*

SAFETY-CAGES.—In the Journal of Dec. 15 a list of safety-cages which enjoy the protection of patent rights is given, and to my surprise it does not contain any mention whatever of a safety-cage patented by Mr. John Thomas Calow, of Staveley, near Chesterfield, on March 10, 1862. The title of the patent is "An improved safety apparatus, applicable to cages or hoists used in mining or lifting machines," and No. 648, the 50*l.* stamp duty on which was paid early in March, 1865. As this patent appears to have escaped notice when preparing the list for the Journal last month, perhaps you would not think me asking too much for your kindly correction in your next Journal. In the *Northern Daily Express* of Dec. 27 is reported an interesting lecture on safety-cages, delivered at the Philosophical Society, Newcastle, at which Mr. Calow's invention was most favourably noticed.—GEO. J. ROBINSON.

SAFETY-LAMPS.—"J. C." (Shotton Colliery).—Experiments for testing the safety of the Davy lamp were made by the North of England Institute of Mining Engineers. It was found that the lamp was practically safe, but that it was possible to whirl it through an explosive atmosphere at such a rate (we believe about 500 yards per minute) as to cause the flame to pass. With the Geordie this could not be done. The gauze usually contains about 25 to 30 wires to the inch each way, or (say) 600 to 900 "pores to the square inch." The price of a patent Clanny is about 10*s.* 6*d.* or 11*s.* 6*d.*, but could be ascertained exactly by writing to Messrs. Abbott, of Gateshead, or any other respectable manufacturer.

COPPER SMOKE AS A MANURE.—In last week's Journal appears a long notice of Mr. Vivian's New Manure Works, at Swansea; but as it states "the smoke will be rendered entirely free from any deleterious effects," I beg to ask how this can be if, as reported, Mr. Vivian's process is applicable to about one third only of the ores used in his furnaces, and that the ores after treatment by this process, must contain sulphur up to the last process in copper smelting, in order to a satisfactory result as regards the copper, which I take it will be of more consequence than the manure to the smelting firms?—A CONSTANT READER: *London, Jan.* 10.

BRYNTAIL MINE.—I beg permission to point out that the short notice of the proceedings at the meeting of shareholders, held on Dec. 13, contained an important error. The mine was finally abandoned by the present company on Dec. 22, 1865, and the division recorded in the Journal of Dec. 22 last, giving a small majority in favour of the abandonment, occurred on Oct. 31, 1865. The particulars appeared in the Journal of Nov. 18, 1865. The meeting of Dec. 13 was simply convened to provide for a pressing liability—the balance due on a promissory note held by the Liquidator of the Bank of London.—A SHAREHOLDER: *Jan.* 10.

CALDBECK FELLS.—As a large shareholder in this company, may I ask the reason that reports upon these mines do not, as hitherto, appear in the Journal? Through what other medium can shareholders ascertain the progress that is being made at the mines? In Great Laxey, Great Wheal Vor, &c., the shareholders have the advantage of perusing reports upon their properties, and why is it not the case in Caldbeck Fells?—A SHAREHOLDER.

FRONTINO AND BOLIVIA GOLD MINING COMPANY.—In reference to the remarks in last week's Journal, "that great disaffection existed at the mines," and that "the gold raised was claimed by the miners for arrears of wages," &c., in the circular just issued the directors inform the shareholders that "some inconvenience to the company's affairs at the mines *must necessarily arise* from the circumstance of Mr. Powning keeping back the November remittance; but the directors have done their best to rectify it, by sending out, on Dec. 1, the sum of 2250*l.* in cash," which amount the agent should be in receipt of ere this, so presume there is little doubt of Mr. Rouch's authority being any longer disputed, backed with the means of satisfying all outstanding claims. I would, therefore, suggest to my fellow-shareholders the policy of meeting the 2*s.* 6*d.* call at their earliest convenience, which will prevent any further interruption to the working of the mines, and will enable the directors to furnish Mr. Rouch with a monthly remittance of 1500*l.*, "which sum for a few months, he states, will not only enable him to bring about an equilibrium between the monthly disbursements and the value of the monthly produce of gold, but also to exhibit a positive and progressive profit." After a careful perusal of the report in last week's Journal, and the fact that over 1000*l.* worth of gold is now being raised per month, I cannot but think that success will yet be attained, with the cordial co-operation of all interested.—SHAREHOLDER.

TOLVADDEN MINE.—I should be glad to learn through the Journal the condition and prospects of Tolvadden Mine, and whether the new engine ordered at the last meeting was ever bought, and what was the result of the application to the Court of Stannaries, made a few months ago?—R. R.

WHEAL AGAR.—I have before me a report of the meeting held on Nov. 23, 1856, with a statement of accounts then presented, by which it will be seen that there are arrears of calls amounting to 1357*l.* odd. Out of this large sum I find that over 600*l.* is due by three shareholders, two of whom were present at the general meeting; and one of these gentlemen, who is heavily in arrear, I am informed, produced a cheque to pay his calls, and, on finding nothing was to be done in the way of forfeiture till the next meeting, replaced the cheque in his pocket. As I consider it very unfair to those shareholders who do pay their calls that such an amount of arrears should be allowed to accumulate, I trust the shareholders will, at the next meeting, enforce the payment of calls in arrear, or the absolute forfeiture of all shares upon which calls may be due prior to the last general meeting.—A SHAREHOLDER.

RUST-FREE PACKING PAPER—"F. J." (Birmingham).—A very good packing paper, similar to that employed in Germany for packing bright steel goods and other articles liable to injury, may be made by saturating the paper with a solution of soap, gum, and glue. Each maker has his own favourite proportions, but a gallon of good sizing may be made thus—Dissolve 3¾ lbs. of best yellow soap in two quarts of water; also dissolve 4 ozs. of gum arabic and 11 ozs. of best Scotch glue in other two quarts—mix the solutions, and warm the mixture. Then dip the paper sheet by sheet, hang it up until it is only just damp, and pass the sheets between rollers to finish and polish.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JANUARY 12, 1867.

Copper is now 86*l.* per ton, but although the price is not so low as it has been, it is still too low to enable mines in course of development to do anything like meeting cost, the reason being that until the lodes sought for are well got into, a large quantity of ore not admitting of treatment by existing processes is produced, but which in less favoured countries than England would be considered highly valuable. The treatment of these poorer ores would enable many mines which have long been amongst call-making ones to meet cost, and ultimately reach the Dividend List without further demands on the adventurers. The great question, however, is not whether further calls should be made, or the mines stopped, but what can be done to make the ores at present raised remunerative to the shareholders or other proprietors at the present or even lower prices of copper.

Although Cornish and Devon mines are, as a rule, well managed, there is ample room for improvement, both in the machinery employed, and especially in the processes in use for making the ores marketable; and it is beyond doubt that the English have been so accustomed to high prices, a market on the spot, and good produce ores, that they have regarded poorer ores as worthless, although the quality is superior, and they contain as large a percentage of metal as the best ores of many of the most promising continental mines. It is notorious that there are now sufficient halvans, or ores not of a character to send to market, to keep a dozen companies profitably employed for the next century; and if these could be treated for the benefit of existing mine companies, many now struggling against adverse circumstances could pay dividends, whilst the reduction of the ores could be treated with as great a certainty of profit as the manufacture of iron in South Wales or Cleveland. It is estimated that the quantity of poor ores raised but not treated yet available for operation is about 2,000,000 tons; and, as the average yield is calculated at 2 per cent., there could be produced about 40,000 tons copper, which at the present low price is equivalent to upwards of 3,000,000*l.* sterling.

A company for rendering this enormous latent wealth available is, we hear, in course of formation, and as it is not intended, it is stated, to undertake any mining operations, but simply to profit by the treatment of ores now supposed to be worthless or unmarketable, already at surface, which will be alike advantageous to the mines possessing such ores and to those undertaking its conversion, so that the enterprise cannot fail to secure the support of all connected with mining. The time, moreover, is propitious, for there is great lack of opportunity of safe investment and uses for the enormous amount of money lying almost idle, and the disposition of the public seems to be turning towards mining. At the weekly sales of shares on Tuesday, by the London Stock and Share Company, the *Times* says—"The mining shares were readily taken," and some at a good premium, which surely, may be taken as a good sign of the times.

THE PREVENTION OF ACCIDENTS, AND THE INSPECTION OF COAL MINES.

About twenty years ago, a large space in the Journal was devoted to the discussion of the best means to prevent the then ever-recurring destruction of human life which occurred in our collieries. Among those who took part in the discussion were some of the most experienced colliery engineers and scientific men in the kingdom, and although there was some difference as to matters of detail, there was a remarkable coincidence of opinion as to the expediency of instituting an official inspection of mines by the Government. The Administration of the day lent an unwilling ear to these suggestions, and it was not until the public were horrified at the frequent occurrence of these dreadful explosions, by which, and by other accidents in mines, on an average 1000 industrious men were annually destroyed, that the necessity for the adoption of some remedial measures became prevalent among all classes of the community. With obvious reluctance HER MAJESTY'S Ministers at last yielded to the demand of the public, and the Inspection of Coal Mines Act was introduced and carried in Parliament in the year 1850.

The persistent advocates for that important measure have a right now to inquire how far that Act has served the purpose for which it was enacted, and if its administration has been such as to merit commendation for the past and to inspire confidence in the future. It is now about sixteen years since it came into operation, they cannot therefore, be charged with precipitancy in attempting to estimate its merits as a means of preventing fatal accidents in mines. Although the average number of lives lost in our mines annually remains unabated, it is some consolation to know that it has not increased, notwithstanding the great augmentation in the quantity of coal that has been produced in the same period. And it will be readily admitted that considerable improvements have taken place in the mode of conducting mining operations, and in the discipline of the colliers. But, whilst admitting all this, it may be unhesitatingly urged, on unquestionable authority, that the Inspection Act has fallen far short of what was fairly and reasonably expected from it—nay more, that from certain causes it has lamentably failed in effecting one tithe of the good it is capable of conferring.

The general and special rules are undoubtedly well calculated greatly to diminish the number of fatal and other accidents, and had they been strictly observed by the colliers, and stringently enforced by the Inspectors, during the last 16 years thousands of human lives would have been saved. Of this we do not entertain the slightest doubt. It matters not how good the law may be if it be allowed to be altogether, or in a great measure, disregarded with impunity. It is true that it is the duty of the Inspectors timely and impartially to compel a strict obedience to the law, and they are invested with ample power for this purpose. To do this it is absolutely necessary that they should frequently inspect every colliery in their districts, and that this inspection should consist of a thorough personal examination of all the underground works; and not merely of half an hour's saunter on the pit bank, and a conversation with the overman or his deputy.

Whether it is that the Inspector's districts are larger than he can possibly attend to, or from some other unknown cause, it is well known that generally his visits are too few and far between to be of great practical service. Instances have been brought to light in which collieries had never been officially inspected until a fatal accident occurred, three or four years since, and that is the only visit with which that district has been favoured since the passing of the Act in 1850 until the present time; and that, too, in mines where the men are "damped out" sometimes two or three days a week. Some of the Inspectors have held that their duty consists in inspecting collieries only when required to do so by the owners or the workmen, and when accidents occur. There may be exceptional cases, and all Inspectors may not entertain these limited notions of their duty, but such derelictions of duty (as all must regard them) are by far too common. The pursuance of such a course of non-inspection is quite enough to account for the failure of the law in diminishing the dreadful loss of life in our mines, and is contrary to both the intention and the spirit of the Act of Parliament.

It cannot be doubted that if this Act were firmly and energetically administered its success would be much greater, and that we should never again have to mourn over the destruction of upwards of 400 men and boys in a single week. Something more is wanting than a mere increase in the number of Inspectors. They are now like a rope of sand, and act without concert, and without that moral power which unanimity would give them. They need a head, with sufficient controlling power to appease all jealousies, and to direct their united energies to the achievement of the object contemplated in their appointment. There can be no doubt but that some alteration is imperatively required,—whether those suggested are sufficient may be questioned, but it would be scarcely justifiable to propose more legislation until it has been proved, by a better administration of the existing Act, what is really needed to render it more efficient.

CHALLENGE TO THE INVENTOR OF THE FIRE-DAMP INDICATOR.

In consequence of the, to use the mildest term, premature efforts of Lord KINNAIRD to secure the compulsory adoption of the Fire-damp Indicator in our collieries, it appears that both his Lordship and Mr. ANSELL have in their overhaste made statements which they are called upon to justify or retract. With regard to the Oaks Colliery, which Mr. ANSELL declared to be one of the "almost palaces of mines * * * in which he had seen such extreme care habitually taken that accidents occurring therein must be considered as legitimate accidents," Lord KINNAIRD has attributed, as an ascertained fact, the explosion to a cause which is not proved by the evidence to have had any connection with the calamity, and which men acquainted with collieries generally, and with the Oaks Colliery in particular, consider a most improbable one; and the result has been an animated discussion as to the grounds upon which his lordship made the statements. Mr. ANSELL'S position in the matter will be thoroughly understood from the subjoined letter:—

"TO THE EDITOR OF THE TIMES."

SIR,—I beg to say that I have heard from Mr. Ansell, but he does not wish his letter to be made public. Persons who are interested are desirous that he and Lord Kinnaird should state all they know, and let those who are practically acquainted with such subjects draw their own conclusions. I have, therefore, written to Mr. Ansell to say that it is considered by many to whom I have spoken on the subject that he has now no alternative but to come down and give evidence at the inquest. The public ought to know if Lord Kinnaird was warranted by Mr. Ansell's report to him in stating what he has done as to the Oaks Pit. I am not going into the merits of the ventilation there now, but am only directing attention to the discrepancy, real or apparent, between Mr. Ansell's statements to Lord Kinnaird and to myself. I trust Mr. Ansell will accept this public challenge. It is given with due consideration, and with the cognizance of those most deeply interested in the management of the pit, which personally is not my case. I have the honour to be, Sir, your most obedient servant,

Harborough-house, Barnsley, Jan. 9. JOHN BROWN.

TESTING OF CHAINS AND CABLES.—The Mersey Dock Board have accepted the tender of Mr. John Roberts for the supply of 120 tons of flat-iron, 1 by ⅛ in., at 7*l.* 2*s.* 6*d.* per ton; and of Mr. John Gibbons, for the supply of a large quantity of cut flooring-brads, at 10*l.* 10*s.* per ton. A letter was read at the meeting of the Dock Board to-day (Thursday) from the secretary to Lloyds' Registry of British Shipping, as to the testing of chain-cables, with a view to secure a better quality of iron in their manufacture than is at present used, and suggesting that a portion of each chain—say 12 links—should be proved to the breaking strain; and also as to the marginal strength beyond the Admiralty strain, and which in the judgment of the board it is desirable every chain should possess. The Dock Board passed a resolution to the effect that it was highly objectionable that Government licenses should be granted for testing machines to any but public bodies who had no interest in the manufacture of anchors and

chains; and it was also directed that a copy of the letter from Lloyds' Registry, and of the dock engineer's report on the subject, be sent to the Board of Trade.

MINING, METALS, AND MINERALS—PATENT MATTERS.

By M. HENRY, Patent Agent and Adviser, M. Soc. Arts, Assoc. Soc. Eng.

A specification recently filed by H. H. YORK refers to certain improvements in the manufacture of iron and steel. He takes pig or cast iron, previously heated, and cuts it up into fine particles, by means of saws, driven at high rates of speed, or otherwise. The cutting apparatus is to be cased in, so that the iron may be collected. Below is a cistern of water; or the hot particles are exposed to the oxidising influence of a blast of air. For wrought-iron, the pieces are placed in a reverberatory furnace, and when the iron is at welding heat the particles are balled up, and then shingled and hammered in the usual way; or he works the particles of iron through charcoal fires; and when working for steel the particles are melted in crucibles, with or without the addition of flues.—HAMPTON'S specification, recently published, relates mainly to the employment of a perforated moveable bridge-plate, inclined from or towards the front of the furnace, or from or towards that part at which the furnace is fed. This perforated bridge-plate, when employed in combination with the ordinary back bridge-plate, will form a chamber for the admission of air, the introduction of which is regulated by a door or valve, capable of being opened and closed with the furnace-door by means of adjustable connections. By these arrangements perfect combustion of the fuel is obtained. One particular arrangement for the purpose is specially described, and consists of a connecting-rod, attached at one end by a knuckle or hinge to the door or valve of the air-chamber, whilst its opposite end is screw-threaded, and carries a rack, in which a pin on a swivel is made to work, such swivel being attached to the furnace-door. The claim is for the employment of the inclined perforated bridge-plate, forming, with the ordinary bridge, an air-chamber, as described. —SPIQUEL and FLORANGE have specified a patent relating to apparatus for stamping on flat or unflattened metals. On a metal table, fixed on the piston of the press, they place a mould having the required devices, in any convenient number, formed or marked thereon. Sometimes a metal box or frame is used, in which are placed as many moulds as may be required. These moulds vary in form or design in any suitable way. These moulds are placed in the box by any ordinary means. To the head of the press is fixed another box, with similar moulds. The piston of the press, on which the lower set rests, is raised by pumps in the usual way. A sheet of metal having been previously put on the moulds, they are then subjected to a sufficient amount of pressure against the top set to produce the required impression. When the manometer in connection with the press indicates the necessary amount of pressure, the discharge-cock is opened, to allow the descent of the piston sufficiently low to withdraw the stamped metal; the cock is again closed, and a similar operation is repeated with another sheet of metal. All that is required on withdrawing the stamped metal is to separate each article by means of a cutting-tool, made to correspond with the article, the device, or design, stamped or moulded.

In another specification, also filed by SPIQUEL and FLORANGE, is described an arrangement in which an hydraulic press, of suitable size and force for the work to be executed, is employed, and set in motion by steam or manual power. The moulds are subjected to the action of the press, such moulds being formed with the required configuration or design to be stamped on the sheet of metal, and the moulds are so placed that they may be conveniently acted on by the piston or stamper. For simple designs the metal plate to be acted on is held down in place by key-pieces, and gradually acted upon by a cylindrical die, which forces it through a series or succession of rings, the last of which is of the proper diameter. For complex designs the inventors use moulds or matrices, made in separate pieces, and forced gradually *in situ*, so that they surround the metal to be treated. When this is accomplished, water is forced through openings in the die, and brought into contact with the top of the metal under treatment. The water acts on all the most minute parts of the pattern or device, and thus the most complex designs are produced. When sufficient pressure has been exerted, the piston descends, and frees the mould.—EDMOND and GURLT'S specification relates to the separation of hot gases, fumes, or vapours in certain metallurgical and chemical operations, such as calcining, roasting ores, &c. The separation is effected under a high temperature, according to the different specific gravities of the fumes, gases, or vapours, in such manner that those of less specific gravity are separated from the products of combustion, or other fumes, vapours, or gases of greater specific gravity, so that the former are obtained in a purer state. For this purpose, the inventors construct the furnaces, vessels, or apparatus in which the fumes, gases, or vapours are produced with openings in the lower part of the side or bottom, and with openings in the upper part. The lighter gases, fumes, or vapours escaping through the one, and the heavier through the other, their exit is promoted by the natural draft or by mechanical draft.—BROADBENT, of Manchester, has applied for a patent for apparatus for preventing smoke from furnaces.—The recent allowances of provisional protection are very numerous, and comprise several relating to the subject of this article, among which may be mentioned—No. 2705, UREN, dressing granite and stone.—No. 3047, BROOMAN (communication from Bernabé), coating iron and steel with copper and copper alloys.—No. 3181, HORTON, metallic tubes or like articles.—No. 3189, RICHARDSON, manufacture of iron.—No. 3197, BRIDGES and BIGWOOD, furnaces.—No. 3203, CHUBB, process and furnace for the manufacture of steel, and metal having some properties of steel.—No. 3247, SMITH and COVENTRY, tool holders and cutters, for shaping and cutting metals, &c.—No. 3266, GALLETT, steel; and No. 3268, WREN and HOPKINSON, dressing slates.—BIRD has applied for provisional protection for artificial fuel; and Dr. WAY, for preparing phosphatic minerals for use as manure (communicated in part to him by C. Henwood, of Sombrero, in the West Indies).

Among recent Applications for Provisional Protection the following may be specially noticed:—No. 40, C. J. POWNALL, prevention of accidents in pits and mines from choke-damp or other noxious gases. This is probably the same inventor as the patentee of some improvements relating to flax some years back.—No. 43, DOERING, engines for boring and working rocks and their stands, &c.—No. 48, CLAUSE, raising brine from deep bore-holes.

Any opposition intended to the following Notices to Proceed with applications for patent must be lodged on or before the 29th inst.:—No. 2088, WORTH, steam-pumps.—No. 2238, GALL, working stone.—No. 2259, CADDICK, furnaces for puddling, balling, heating, and melting metals.—No. 2415, BERNARD, steel, and producing gas.—No. 2558, SAUL and ARMSTRONG, carburating gas.—No. 3047, BROOMAN (communication from Bernabé), coating or covering iron and steel with copper or copper alloys.—No. 3123, NEWTON (communication from Tarr), cast-steel railway-wheels and other metal castings.

Among sealed Patents may be noticed:—No. 1782, FAIRBURN, forming or combining small coal or coal-dust into lumps, blocks, or otherwise. —No. 1784, BRUNTON, sinking shafts or pits and driving tunnels.—No. 1788, AYDON and FIELD, drawing and forcing fluids.—No. 1789, SALMON, furnaces. —No. 1813, HAWKSLEY, WILD, and ASTBURY, furnace.—No. 2484, HASELTINE (communicated from Lowe), bronzing machine.—No. 2778, HOWARD, obtaining immunity from danger in using combustible oils.

INDUSTRIAL EXHIBITIONS, AND INVENTORS.—At the last members' meeting of the Inventors' Institute Mr. F. W. Campin, Barrister-at-Law, read a paper "On Industrial Exhibitions, and their effects on Inventors and the Progress of Invention." He began by remarking, with regard to the history of such exhibitions, that perhaps their origin ought to be traced back to the Great Exhibition of 1851; but proximately, as displays of the productions of the working classes, their origination might be found in the movement organised by the practical philanthropy of some gentlemen well known in South London, amongst whom Messrs. Murphy and W. H. Miller ought to be named, the Lambeth Baths being the place at which the first Exhibition was held, which was so far successful that it was followed by similar undertakings in the East and West districts of the metropolis and the City of London, and by others in several of our large towns; also by one held in the North London district some two years ago, under the auspices of the same gentlemen who projected and carried out the Metropolitan and Provincial Working Classes Exhibition recently held at the Agricultural Hall, Islington, which latter was particularly noteworthy, not only as being the latest successful effort of the kind, but also as being the first in which the articles exhibited were supplied from all parts of the country. Mr. Campin proceeded by taking the last mentioned Exhibition as a sample of these enterprises in general, remarking, by the way, that although much credit was due to Messrs. Watts, Alderton, Wilson, and other members of the Executive Committee, yet the Exhibition was defective in regard to the arrangement of the articles exhibited, which led to much difficulty being experienced by the adjudicators, as was specially remarked by those gentlemen who particularly concerned themselves with the department of Inventions and Improvements—Messrs. Peter Le Neve Foster, senior and junior, members of the Society of Arts; and Prof. McGaulay, J. Imray, C.E., and himself (Mr. Campin), of the Inventors' Institute. The paper went on to treat of these exhibitions in regard—1. To their educational and instructive character.—2. Their progressive character as public amusements.—3. Their socially regenerative character.—4. Their effect on inventors and the progress of invention; and he said instruction could not fail to be obtained by inspecting collections of such a great variety of things illustrative of so many different branches of practical science, to say nothing of Ornamental Articles and the Fine Arts department, and he showed that the whole display emanated from *bona fide* working people, such as clerks, engineers, mechanics, artizans, gardeners, labourers, domestic servants, &c., and hence the praiseworthy occupation of time which might otherwise be passed in the public-house must be socially regenerative; and the exhibition of industrial efforts of working men could not fail to excite other working men to endeavour to excel the exhibitors, and thus render such exhibitions progressive. Further, as amusements, these displays were of a very gratifying and superior kind. With reference to the effect on inventors and inventions, it was said that the present Patent Laws created a great drawback, inasmuch as there was no real available protection, even of a preliminary kind, now attainable, and Mr. Campin advocated a new legislative measure, to enable exhibitors to get a proper protection of (say) twelve months' duration for a very small sum—for instance, 1*l.*,—which ought to be supplemented by a thorough reform of the Patent Laws. After the reading of the paper a discussion ensued, in which, amongst other gentlemen, Mr. Ramsey, the hon. secretary of the City of London Exhibition, took part, detailing the nature and character of that industrial display, and fully vindicating it from the charge that it was not a *bona fide* working man's exhibition.

HOT-BLAST AND COLD-BLAST SUPERSEDED.—An invention, which promises to prove of immense importance to the iron trade, has recently been patented in the United States; it consists in the use of a blast, neither hot or cold, produced by the most ingenious and economic arrangement. In scarcely any department of iron working has there been more attempted improvements than in that relating to the mechanism connected with the air-blast for furnaces and forges. To a superficial observer nothing could appear more simple than the introduction of air, or oxygen, to a fire, by means of an artificial blast; but, in practice few things are attended with more difficulty. A coal-blast deadens the fire, and hinders free combustion, while a hot-blast quickens and forwards the ignition of the fuel. According to the invention of Mr. John Bayliss, of New York, it would appear that the advantages of both the hot and the cold-blast principles may be secured; it consists practically in warming the air in the tuyere itself. The tuyere proper is contained in, and opens into, an air chamber—it has an ordinary water-way for keeping the nose cool—and into this chamber the cold air is forced, and in causing a cooling effect becomes itself heated, and enters as blast. It is claimed that by this contrivance there can be no making of slag in the mouth of the tuyere, and that at all times the blast will be open and clear.

REPORT FROM SCOTLAND.

GLASGOW, JAN. 9.—The Malleable Ironworks have only partially resumed work since the holidays; and as the notice of 10 per cent. reduction has expired, in a number of them about Coatbridge the workers have accepted of the reduction, and it is expected the others will follow. In the works not yet commenced for the year, we learn that the hands are ready to go in at the reduced rates. The action in Staffordshire will compel our first-class makers to reduce their quotations, and we understand that although no general action has been yet taken, prices are now 10*s.* a ton under the list quotations. This makes best bars 7*l.* 10*s.*; inferior makers are loath to change, but are compelled to take 7*l.*, or lose all chance of orders. At these figures, even with a reduction of 10 per cent. in the make, manufactured iron is by no means remunerative. Shipbuilding Iron is in little demand, and the few contracts entered into will not keep up the yards to near an average standard. English manufactured iron is offered here at very low prices, and is doing this market considerable injury. The total number of vessels launched on the Clyde last year was 171, of 120,503 tons. On the Tyne there were 110 vessels, of 51,807 tons. On the Wear, 148 vessels, of 52,990 tons. At all these ports there was a falling off, but the greatest was experienced in the Thames and Mersey. The Pig-Iron market has been dull, but steady, at advancing quotations, and buyers are shy. There cannot be a doubt but that the action of the ironmasters to limit their make will have a most beneficial effect on the market, and influence prices, if a demand were to spring up, at least 5*s.* a ton. Since the beginning of the year there has been an advance of 7½*d.* a ton for cash business, and about the same for delivery a month. The shipments show the dulness of the trade, as there have only been 8355 tons shipped for the week just ended, against even the lesser sum of 6150 tons in 1866. To-day the market has been strong, and a fair business done at 54*s.* 10½*d.* cash, 55*s.* 1½*d.* a month. At the close iron was still on sale at 54*s.* 10½*d.* cash; buyers, 54*s.* 9*d.* Coals are not in great demand, and a pretty general reduction of from 6*d.* to 9*d.* a ton has been made on all kinds, dross excepted. The miners' wages will shortly be reduced 6*d.* a day, and the Union are "permitting" the hands to accept of the reduction rather than strike. The very admirable way in which the Cornishmen are acquitting themselves, and the regularity with which they attend to their business, are making them great favourites. The shipments, owing to the closing of the Northern ports, are under those for last year, the figures being, for the week ended yesterday 11,000 tons, against 13,850 tons same week last year.

Last Thursday was a gala day with the Scotch miners, who met, by their delegates, in the Bell Hotel here, principally for the purpose of presenting their secretary, Mr. M'Donald, with a testimonial of their esteem for his services. The first business was introduced by Mr. M'Donald, who detailed the extensive correspondence he had had with many noblemen and gentlemen in various parts of the country anent the late lamentable catastrophes. After lauding Lord Elcho for his deep interest in the miners' welfare, he read two letters from that nobleman, in which his lordship regrets, among other things, that he "cannot run down and see him;" and both epistles are introduced with "Dear Mr. M'Donald." Of course, a secretary of such high standing, and flattered with such connections, was, undoubtedly, worthy of a testimonial; and the miners, after much beating about, were enabled to raise the handsome sum of 228*l.* 9*s.* 6*d.*, which they presented to him, with an address, congratulating him on his recovery from his recent illness. Mr. M'Donald thanked his friends for the gift, and went on to assert that the result of the strikes and short-hour agitation of last year had yielded the miners 432,000*l.* of clear gain, and this policy had led to an advance in the wages of other miners till the total reached the sum of 544,000*l.* Now, what is the real fact? There is said to be 24,000 miners in Scotland working four instead of six days a week—loss, 312,000*l.*; at least six weeks have been consumed by strikes—loss, 216,000*l.*: total loss, 528,000*l.* This loss, then, is their real gain, and yet the meeting applauded the secretary for his conduct. The meeting, the correspondence, and especially the singular familiarity exhibited by Lord Elcho and his noble confreres, have drawn a biting leader from the *Glasgow Herald*, which, like Pericles' eloquence, will "leave stings behind." To the disquisition by the *Herald* Mr. M'Donald replied at a meeting of delegates, held at Motherwell, on Monday, at which he denounced the Mine Inspectors, whom, he thinks, should be all hanged! In fact, the aim of his speech was to show that he was the only trustworthy friend the miner had.

Last week Lord Ormidale and a jury were engaged four days on an appeal case—Wilson *v.* Merry and Cunninghame—which set forth that the son of the pursuer had been killed by an explosion of fire-damp in one of the defendants' pits at Hamilton, for which she claimed damages of 400*l.* The jury, after some deliberation, granted 100*l.* Mr. M'Donald reported at the Monday meeting that the defendants' were to appeal it to the House of Lords, and that the Miners' Association were prepared to expend 6000*l.* or 60,000*l.* in its defence.

Mr. Thomas Wheatley, locomotive superintendent of the London and North-Western Railway Company, at Wolverhampton, has been appointed locomotive superintendent of the North British Railway Company.

A fine screw steamer, of 530 tons, has been launched this week for the passenger traffic of the London and South-Western Railway Company between Southampton, Jersey, and St. Malo. She is named the *Cæsarea*, and will have direct-acting engines of 130 horse-power.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JAN. 10.—The Quarterly Meetings of the South Staffordshire Iron Trade have been held, to-day at Birmingham and yesterday at Wolverhampton. They have not afforded any satisfactory ground for anticipating a very speedy revival of the demand for manufactured iron. Pigs have been sold to a small extent at some 5*s.* reduction from previous prices, and South Staffordshire makes range from 2*l.* 15*s.* to 3*l.* 12*s.* 6*d.*, or perhaps 3*l.* 15*s.*, in case of some very exceptional brand. The one question is—will the men at the ironworks submit to the reduction of 10 per cent. in wages, of which notice was given in North and South Staffordshire on Saturday last? It is difficult to form any confident jndgment on the point. The Brierley Hill Ironworkers' Association, which represents the puddlers, has held meetings, and the Millmen's Association have also discussed the question, and both, before the decision of the masters last week, intimated their determination to resist a reduction of wages. It is, however, one thing to hold out a threat, with a view to influence the conduct of others, and another thing to enter upon an actual struggle. The men say that stocks are low, and that trade will improve. That stocks are low is pretty certain, that trade will improve all hope, and many think likely to take place early in the year, but this is a speculation, and as the long strike in the North did not impart any animation to the demand in other districts, one must receive with caution hopes and expectations of an active demand. The actual fact is, that the trade is now very slack, and has been so for some months, and the masters urge that should the hoped-for improvement appear, the men may more easily recover the amount of the reduction than they can now prevent it.

At a meeting of the Coalmasters, at Wolverhampton, on Wednesday, it was decided to reduce the wages of the coalminers 3d. per day, or rather per day's stent, as a fixed amount of coal got is termed. No reduction is to be made in the wages of the thick coal colliers. The demand for the coal is less dependant upon the ironworks than in the case of the thinner seams. The important prosecution under the Mines Inspection Act, in which Mr. Cope, mine agent, is defendant, and which was adjourned till to-morrow, at Wolverhampton, has now been fixed for Monday week, at West Bromwich. The question raised is essentially how far the mine agents are responsible for the conduct of a colliery, where the work is let to a contractor or butty, who is in the pit whilst they are away.

Two chartermasters, who were at work in the Sytch Colliery, Bursiem, on Monday, were killed by a great fall of roof, immediately after they had fired a shot in a seam known as the Red Slag Ironstone. Two other men in the pit escaped, but had some difficulty in getting to the shaft.

An inquest was held on Monday, as to the death of John Hughes, a collier, who was killed at the Brookhouse Colliery, near Hanley, in North Staffordshire, on the previous Friday. The deceased was a loader, and was killed in the shaft, owing to the defective state of the winding apparatus, the brake being incapable of sustaining the weight in the shaft, which led to the whole running down and crushing the deceased. The witnesses were examined by Mr. Wynne, Inspector of Mines, who elicited that the wheel and brake were, and had long been, very defective, and that the over-running of wagons or tubs in consequence had been of constant occurrence. None of the butties, nor, indeed, the managers, appeared to be in the least disconcerted by this state of things, or to take any steps to really repair the mischief. Three new wheels had within the last day or two been sent to the pit, but nothing had been done to make use of either of them, and the butty in charge of the working had not thought it worth his while to report the condition of the machinery. After the evidence of the two witnesses examined had been taken, Mr. Wynne, addressing Mr. Knox, the manager of the colliery, said he believed that the loss of life at the Brookhouse Colliery had, in proportion to the coal raised, exceeded that at the Talke Colliery, including the late fearful calamity; and he warned Mr. Knox that a change must take place in the management of the colliery, which if not made voluntarily would be enforced. The Coroner remarked that the butty who had been examined was most unfit for the place. He added, that the managers and owners of the colliery appeared equally indifferent, but were more culpable than those under them. This was a frightful case of bad management, one of the worst he had known. A verdict of "Accidental Death" was returned.

At the Wolverhampton Police Court, on Friday, Mr. W. Thompson, of the Stow Heath Colliery, was summoned under the Mines Inspection Act for allowing two girls to have the charge of the machinery. The information was laid by a man named Richard Hall, who, and a man named Juston, swore that they saw two girls lower one man, and raise another in the shaft. The evidence for the defence was a flat contradiction of the allegations of the informer and his witness, and the magistrate, in dismissing the case, could only say that there was gross perjury on one side.

An important decision was given by Mr. Welford, County Court Judge, at Birmingham, on Tuesday, in an action brought by a draper, at Oldbury, against Messrs. Chance, proprietors of the extensive chemical works there, from whom plaintiff sought to recover damages for the fumes from their works having bleached the coloured goods in his shop. Defendants had a few years ago paid compensation for similar damages, but to prevent the injuries complained of had erected a condenser, which, according to Dr. Angus Smith, was thoroughly efficient in preventing the escape of muriatic gas, which it was stated was the cause of the injury of which plaintiff complained. He deposed that his shop was filled with a visible vapour, which he traced continuously to defendants' works. They adduced a good deal of generally negative evidence to prove that such an escape could not have taken place from their works, and that it never did during the period to which the injuries were referred. The Judge laid down that the defendants were responsible for any injury their operations really caused, whatever precautions they might have taken against such injuries, and he decided that the positive evidence of the plaintiff was not clearly rebutted by the generally presumptive negative evidence. The process might have been imperfectly carried on by workmen, and the injuries so caused; and he gave a verdict for the plaintiff for the amount claimed, which was only 4*l.* The costs would be very heavy, as the whole question was fought out on this one case.

The inquest upon the bodies of the 91 persons who lost their lives by the Talk-o'-th'-Hill explosion has been resumed, but no evidence of material importance has been taken. The underground manager, Mr. Thomas Nicholls, was responsible for the whole of the underground management, and was last in the pit, the day but one before the explosion, and found all right and clear. He tested the lower levels shortly before the explosion, and found no gas there. His instructions were that no man was to work where there was gas. He never had complaints of gas being in the pit, excepting in one or two cases of gas being in the bottom level, when the men were called off, and the gas removed in 20 minutes. That was some time ago. He examined the mine two or three times a week. Although Mr. Nicholls does not seem to have been aware that the rules were habitually infringed, blasting with gunpowder was allowed, a large number of false keys were found on the bodies, although the two firemen and the two deputy-underlookers were the only persons authorised to carry them, and a pipe and matches have been found since the explosion.

But the most important point in connection with the calamity is the statement of Mr. Alex. Macdonald, the head of the miners' delegates, at the meeting at Motherwell, on Monday, where he stated that the Miners' Union "have made a searching enquiry, as far as our means would go, and it cost us a very heavy expense into the Harecastle (Talke) explosion, and we find that for months and months that pit had been recognised as in a state ready to explode at any hour." It was very wisely determined that the consideration of this statement, which two of the jurymen did not hesitate to pronounce a deliberate falsehood, should be deferred until the close of the enquiry. If the statement be true, it is very discreditable to the Miners' Union that they took no measures to aid the coroner and jury in discovering and punishing those who had thus wantonly placed the lives of so many men in jeopardy; whilst if it be false, it is to be hoped that no expense will be spared to secure the thorough exposure of the falsehood, and to teach Mr. Macdonald that in his pursuit of popularity among those who believe in him, he must avoid the propagation of groundless assertions calculated to injure others.

The coalowners of Ashton-under-Lyne have unanimously determined that the demand of the men for an advance of 2*d.* in 1*s.* on their wages should be vigorously resisted.

REPORT FROM MONMOUTH AND SOUTH WALES.

JAN. 10.—The Iron Trade of South Wales is in about the same state as when last reported, no change having taken place either for the better or worse; indeed, it cannot well be in a worse condition. Still, makers are buoyed up with the hope that matters will soon begin to mend at least a little, for it is entirely out of the question to expect the setting in of any decided activity for a long time to come. The Monmouthshire ironmasters have not yet given any indication of taking steps for lowering wages in this portion of the district, but it is thought that, should the Staffordshire ironmasters succeed in the reduction movement, a similar step will be adopted here, and that the requisite notices will be posted up at the end of the present month. Great satisfaction has been expressed at the resolution come to at the adjourned preliminary meeting to reduce the price of manufactured iron 20*s.* per ton, and for this reason—that it will assimilate the "list" prices with those that are really accepted by the trade. It is also hoped that this assimilation will be the means of inducing home consumers to enter the market with some of the orders they have for such a length of time been keeping back, the more especially as a feeling of confidence is again beginning to spring up in most branches of trade. Low as the present prices for iron are, the ironmasters of South Wales are placed in a very favourable position when compared with the ironmasters of other iron-producing districts, because they have, as a rule, the coal and iron-stone fields in their own hands, and the works are generally situated where there is an ample supply of minerals. The "sensational feeling" with respect to the competition of Belgian and other foreign ironmasters competing with British ironmasters is cooling down, and parties are beginning to see that, as the present price for railway bars in South Wales is at such a low point that it has not been touched during the last five years, therefore Welsh manufactured iron is cheaper than any other in the world, and, consequently, all such orders which may come into the market will naturally flow here for execution. And here it might also be stated that some of the announcements respecting the successful competition of the Belgian makers have been much exaggerated, and in one instance, that of securing a large Russian order, was altogether wrong, as the adjudication up to a few days ago had not been made. With respect to home transactions, scarcely anything is doing, and the various establishments are kept going principally on foreign contracts, which, fortunately for both masters and workmen, have been coming in pretty regularly. The exports of iron in December, as compared with November, show a falling off of 5869 tons, and of 7103 tons, as compared with the exports for October. The returns, however, show how well the American demand kept up, as in the month of December there were cleared out for the United States 1863 tons more than during the month of October. Since the opening of the new year a few orders have been placed from the transatlantic markets, and the advices received from New York speak hopefully as to the future. With the other foreign markets things are comparatively quiet, but still prospects are encouraging. There is every probability of a satisfactory spring trade being done with the provinces of British North America, whilst the requirements of Russia for the year will be heavy. Two or three good contracts are expected in the market before long, on Indian account; and if the "means" can be found, Italy may safely be put down as a large customer. There is no alteration to report either in the demand or quotations of pig-iron. Since the decision of the quarterly meeting of the tin-plate trade, fixing old prices, buyers have evinced more disposition to enter into transactions; quotations, however, remain the same. The activity which has for so long a period characterised the foreign demand for steam coal is maintained, and the inland trade is very good. House coal proprietors are doing an average business, and the coasting trade is brisk.

At the Swansea Police Court, on Saturday, Mr. Alexander Rain, proprietor of Llangiwicke Colliery, pleaded guilty to not having sufficient places of refuge in the Hendreforgan Colliery, at sides of such places at intervals of not more than 20 yards, and was convicted in the penalty of 24*s.*, and 36*s.* costs.

On Thursday the coroner and jury reassembled at the Black Lion Hotel, Aberewmboy, to enquire into the circumstances by which William Lightfoot, Richard Harris, and Ebenezer Morris lost their lives at Aberewmboy Colliery, on Sunday night, Dec. 23. Mr. Wales, Her Majesty's Inspector of Mines, was present during the investigation. From the evidence adduced it appeared that on Saturday, Dec. 22, there was a fall in No. 2 cross-heading, and on Saturday night men were employed to remove the rubbish. Not being all removed, the deceased and two others were employed to complete the removal on Sunday night, under the direction of the night fireman, John Richards, and the rubbish was to be hauled into No. 3 stall, No. 4 cross-heading. At the time of the explosion the deceased had not actually began to work, and their bodies were found in No. 3 stall; a horse and a tram of dung were also there, which ought not to have been there. Four other gangs of men were in the pit at the time, but fortunately they were in parts of the works totally separated, and ventilated by quite different currents of air. Two other men and a boy, however, who were in the same part narrowly escaped with their lives. One of those, William Williams, deposed that he was requested by John Richards, the fireman, to clear away the fall, and that Lightfoot would show him where it was. He went at

12 o'clock on Sunday night, and received the order at the flue. Harris was to stow the rubbish, and Lightfoot was haulier to remove the rubbish. Five of them went together to the stable, which was on their way in going to their work, where there was a tram full of manure. Lightfoot wanted another tram, and hitched his tram to the horse, and took the tram away. He said he wanted another tram, and would not go into the other side for one. Witness remonstrated with him, and told him he would be fined if found out. Lightfoot went on with the tram up one of the headings, and Harris and Morris went with him. Witness and David Jones went as far as they were to go, and, as Lightfoot told them to go to the slope, they went to the fall to wait for him to bring them a tram. They found a tram there loaded, ready to be removed, and the air was very good. While they were standing there the explosion occurred. Evidence was given to show that it was the fireman's duty to go before the men every morning to examine if there was any fire in the work, mark places where it was, should there be any, and come out to meet the men and tell them the place was safe. Mr. Wales was of opinion that Lightfoot had left his door open, and thus prevented air from getting into the stall in which the explosion occurred; consequently, gas accumulated, and the explosion was caused by Lightfoot and his two unfortunate companion driving the horse with the tram of manure into the stall in a violent manner, forcing the gas that met them through the wire-gauze of the lamp. The coroner left it for the jury to say whether the accident was caused by the negligence of Lightfoot, or was to be attributed to the negligence of John Richards, the fireman, in allowing the deceased to enter No. 3 stall before he had personally examined it and reported it to be safe. The jury returned a verdict ascribing the accident to Lightfoot, but said they thought Richards had not been sufficiently attentive to his duties. They recommended that in future he should descend the pit an hour of so before the men, instead of after them, and sufficiently examine each place, and mark and report it safe, before he allowed the men to enter.

Of late there have been several presentations to colliery managers, &c., in this district, and among them we have much pleasure to notice the following:—It having become known that Mr. JOHN JONES, the respected manager of the Aberdare Collieries, was about to leave for the North of England, the agents and workmen entered into a subscription, and purchased a splendid silver service of the value of 45*l*. The presentation was made by Mrs. William Davies, the head overman's wife, at the Drill Hall, in the presence of a large assemblage, Mr. Daniel Lloyd, the cashier of the works, presiding. A valuable presentation has also been made to Mr. and Mrs. JOSEPH GREEN, of Cwmbran, of the value of upwards of 52*l*. Mr. Green had been mineral agent to Mr. John Lawrence for 16 years, and on his leaving the service of that gentleman to succeed Mr. Llewellyn Llewellyn as mineral agent to the Ebbw Vale Company, at Pontypool and neighbourhood, the miners and colliers of Cwmbran determined to testify their respect and esteem for himself and Mrs. Green in a manner not to be misunderstood. The presentation consisted of a gold watch and guard, and a purse of money to Mr. Green, and a handsomely bound Bible to Mrs. Green. The proceedings were participated in by a very large assemblage. Mr. Jabez Jacobs, of Pontypool, succeeds Mr. Green at Cwmbran.

Mr. David Davies, one of the managers in the establishment of Messrs. Kennard Brothers, of the Crumlin Viaduct Works, has patented a machine that supersedes manual labour at the anvil, the "Patent Self-acting Steam Striker," for forging all kinds of smiths' work. A correspondent of the *Cambria Daily Leader* says it is capable of taking the place of ordinary hand strikers in front of the smith's anvil; and it is specially adapted for striking blows either vertically or in any direction inclined to the face of the anvil. It will, in short, describe a circle, and strike at all points, being under the entire control of the smith. The "striker" which I saw at the Viaduct Works keeps four fires and one furnace in constant operation, from which various kinds of forgings are produced, and it does all this at one-third the cost of doing the same work in the ordinary way, with hand strikers. It is quite a new invention, not more than six or eight having yet been sent out; but orders are now flowing in rapidly, and upwards of a dozen are at the present moment in course of construction. They are made by the Messrs. Kennard, whose establishment is now famous from the fact of it being from thence that the beautiful viaduct sprang that spans the valley in which the works are situated, and from whence similar structures have found, and are still finding, their way into all parts of the world. The "striker," I should add, can be worked by either steam, compressed air, or water pressure.

The arrivals at Swansea include—the Emmeline, from Caldera, with 278 tons of copper regulus, in bulk, and 170 tons of copper, for H. Bath and Son; the Chevrette, from Cherbourg, with 60 tons of silver ore, for W. Crawshay; the Concordia, from Antwerp, with 150 tons of fire-clay, for Shackleford, Ford, and Co.; the Ernest, from Rotterdam, with 120 tons of pipe-clay, for Vivian and Sons; and the Jeune Colombe, from St. Malo, with 160 tons of zinc ore, for Mr. Rowland.

TRADE OF THE SOUTH WALES PORTS.—The following are the returns of the exports and shipments of the South Wales ports during the month of December last, and the corresponding month of 1865:—

EXPORTS OF COAL.	Dec., 1866.	Dec., 1865.
Cardiff ..... Tons	145,420 ..... Tons	125,521
Newport	22,269	30,145
Swansea	46,761	37,197
Llanelly	9,872	8,321
SHIPMENTS COASTWISE.	Dec., 1866.	Dec., 1865.
Cardiff ..... Tons	62,207 ..... Tons	59,472
Newport	53,120	40,089
Swansea	19,643	17,531
Llanelly	10,804	12,447

Newport also exported 4913 tons of iron, Cardiff 7070 tons of iron and 1488 tons of patent fuel, and Swansea 175 tons of iron, and 8651 tons of patent fuel.

PROGRESS OF NEW WORKINGS NEAR NEATH.—The Vale of Neath and Cefn Mawr Junction Railway has been commenced, and they have formed and ballasted 27 chains, ready to lay down the rails. This branch railway will connect three large collieries, and put them in a position to send their coal to any port in the Bristol Channel, besides Liverpool and London. The narrow gauge trucks will go right to the level's mouth, and the coal will not have to be transferred into others. The colliery that this short branch will at once develope is known as the Clyne Steam Colliery Company, about one mile along the branch; the company are pushing on a double turn, to enable them to send a large quantity of coal to market by the time the railway is ready; there are two great savings connected with the company's takings—they will not require any sinking to get to the coal, neither have they any fire-damp in the whole property, about 350 acres. The second property is called the Glyn and Blaentwrch Company, which comes to the line by about half a mile of siding; this colliery contains the same quality of coal as the Clyne, can be worked in the same way, and as cheaply. There may easily be sent from both collieries 500 tons of coal per day. This company's taking contains 400 acres. The railway, when completed, will run right to Blaencwm. The third company is the Neath and Merthyr Steam Colliery Company's property. This property embraces the Blaencwm estate, belonging to Mr. Ayrton. Cefnmawr is Mr. Morrison's. Here, at the end of Blaencwm Valley, there are three levels opened out; No. 3 level is driven about 170 yards into the solid coal, which is first-class, equal to any of the seams in the Aberdare district, so much so that some of the coal has been tried by several of our most influential and practical engineers, and all unanimously agree as to the quality and quantity of coal in this valuable estate, and they only require to drive about 160 yards of air-course, and a furnace to ventilate the collieries, with a little more plant and screens, when they will be in a position to send a large quantity of coal to market; and it is fully believed that there cannot be a more judicious winning, coupled with economy, and a substantial development of the company's property. Shareholders should visit, and see for themselves.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

JAN. 10.—The Iron Trade of Derbyshire has contrasted most favourably, during the past year, with any other part of the country. Strikes have been almost unknown, and the result has been that the men, as might be expected, are in a much better position than most of their fellow-workmen. At Staveley the works have been kept fully going, and under the energetic management of Mr. C. Markham, the managing director, that state of things is likely to be continued so long as the employees find that it is to their benefit to work in harmony with their employers. The firm have done a very extensive business, not only in gas and water pipes, for which the late Mr. Barrow had a high reputation, but in almost every description of plain and manufactured iron. They have, however, been less fortunate at their collieries. Although, for nearly the first nine months of the year, the men were well contented, after that time the whole of Derbyshire, so far as the miners were concerned, became suddenly convulsed, and a most uncompromising desire was manifested for the formation of a Union, which should curb the power of the masters, place the men in the ascendent, cause an increase in the amount of wages hitherto paid, and lessen the hours of labour. To ask for an increase of wages, and to work less hours, were quite legitimate objects for the men. But those demands were put forward in so offensive a manner that the employers felt bound to resist them. They were all desirous of meeting their men in the most liberal spirit, but they determined not to be coerced into making concessions by a foreign body, who were not in the slightest degree interested in the welfare of the mining population of the district, further than for the obtaining certain objects of their own. The Miners' Association of South Yorkshire having been very successful in their own district in advancing the prices for getting coal, considered that they had a legal commission to go into other parts of the country, and raise the banner of revolution. They fixed upon Derbyshire as the point of attack, and their first efforts were in every way successful. The men—many from the love of excitement, and others from a desire for change—rapidly enrolled themselves as members of the Union, and the result was that in a few weeks the Derbyshire Union appeared very formidable. The employers, however, showed that they would not be forced into making concessions by threats, and stated that they were determined to show equally as bold a front as the men, whose courage had been stimulated by the introduction of the foreign element. Some hundreds of men gave notice to leave, and, with their families, left their comfortable houses to vegetate in tents. However, a reaction set in, and numbers of those who were led away in the first instance regretted having been so; and one of the most singular circumstances in the history of trade disputes took place. Discontented with Union principles, several of the men formed themselves into an Anti-Union society, and though few to start with, their numbers increased day by day, so that at the present time they have become a most powerful body, numbering no less than 2180. With such a combination, and with the aid of other districts, like those in Cornwall, the Staveley Company have become comparatively independent of the Union, so that the great efforts made by the South Yorkshire Association is likely to come to nothing, and the situations that were to be filled up by clever agitators are likely to remain vacant—at least for some time to come.

There has been no alteration in the state of trade in Yorkshire. This week the notices of a considerable number of the ironworkers will expire, and it remains to be seen whether they will accept the proposed reduction. In the present depressed state of the iron trade it is more than likely that the men will accept the inevitable necessity, for, bad as business is in most parts of the country, it is as good in this district, if not better, than in any other, either north or south. During the past week a few orders for plates and sheets found their way into the district, but they are not of any great importance. Business at the Penistone steel works continues active, and the firm of Cammell and Co. (Limited) have decided upon calling up an additional 7*l*. 10s. per share, which would make a total of 80*l*. paid-up, and to issue debenture shares at 7 per cent. to the amount of 360,000*l*. There is a good demand for nearly all qualities of coal, which has been still further increased by the severity of the weather during the past week.

At the Oaks Colliery all three shafts have been sealed up, and it is now expected that some months must elapse before the covering will be removed, and an attempt made to recover the bodies. Having visited the pit yesterday, I am enabled to say that there can be no doubt but the fire at the bottom has obtained a considerable hold, as smoke and gas alternated from one shaft to the other as fast as the air was stopped from going down.

The Oaks Colliery Relief Committee (through Mr. W. H. Peacock, their honorary secretary) report that the utmost credit is due to the Miners' Association, which paid 8*l*. to each widow whose husband's body was recovered, and 4*l*. to each when the husband's body was still in the pit, and they have since paid weekly 5*s*. per week to each widow and 1*s*. per week for each child. This relief has *not* been limited to those widows whose husbands were members of the Union;—this has absorbed 1600*l*. already. Other friendly societies have disbursed more than 1000*l*. There are 658 souls dependent upon the relief fund, and to this must be added the posthumous children who will become chargeable on the fund. The subscriptions already raised are—in cash 7927*l*. 11*s*. 6*d*., and in promises, 2365*l*. 4*s*. 8*d*.=10,292*l*. 16*s*. 2*d*., whilst 75,000*l*. is required.

The adjourned inquest upon the bodies recovered from the Oaks Colliery was resumed on Monday, at the Barnsley Court-house, Mr. Vernon Blackburn, barrister, representing the proprietors, and Mr. Birnie, from the office of Shaen and Roscoe, appearing on behalf of the National Miners' Association, to watch the case in the interest of the sufferers. The Government was represented by Mr. Joseph Dickinson, Her Majesty's Inspector for the Manchester district; Mr. Kenyon Blackwell, the Commissioner specially appointed by the Home Secretary; and Mr. Serjeant Robinson, appointed to afford any necessary legal assistance. Mr. Dickinson stated that he attended in Mr. Morton's place, because owing to the intense anxiety and excitement caused by the catastrophe, Mr. Morton had so broken down in health, bodily and mentally, as to render his resignation necessary. The attendance of Mr. Dickinson has given general satisfaction, and much as the calamity that has befallen Mr. Morton is regretted from humane considerations, the feeling that his resignation is desirable is now very prevalent. That Mr. Morton possessed much sound practical knowledge is not doubted, but whether the district has ever been so strictly inspected as its generally fiery character demanded is much questioned. Although the views of the Inspectors as to the precise nature of their duties differ, it cannot be doubted that the appearance of the Government official underground has an enormous moral influence; and especially since the return demanded by the House of Commons as to the number of visits made by the Inspectors (previous to accidents) to the pits under their care, there have certainly been many complaints that the Yorkshire colliers have never seen their Inspector, and that the Inspector knew but little of the pits beyond the fact that, by denominating shafts collieries, there were 460 in number. The inquest appears to be conducted with the greatest care, but, of course, comparatively little information of practical value can be got until the pit can be examined. Judging from the evidence as yet taken, it seems extremely doubtful whether the shot in the stone drift has been fired at all, or whether what Bates and Youle describe as the report of the shot was not, in fact, the first explosion in the pit. The inquest has created a good deal of interest. The assertion of several of the workmen who were examined on Monday, that the explosion *was caused* by the firing of the shot in the stone drift, and their decided manner, had evidently no small effect on the jury. On the other hand, Mr. Maddison on the first day of the enquiry, and to-day Mr. Minto—who for some years was the underviewer—distinctly stated that the shot could not have caused the explosion. We have thus the opinion of all the mining engineers and underviewers against that of a few of the men, but which side will be believed it is hard to say. The Miners' Association are taking great interest in the matter, and to-day Mr. Channell, a barrister, appeared to watch the proceedings on behalf of the widows and relatives, so that there is some prospect of extensive litigation.

The slanderous statements made against the Staveley Company at a delegate meeting at Manchester, by a person named Barker, has been most ably met by Mr. Charles Markham, who gives ample evidence that the company have not in any case acted harshly, or even exercised the full rights which their agreements with their late workmen entitled them to. The company have solely taken the very necessary stand against the attempted exactions of the workmen's Union, and the success achieved has no doubt annoyed certain delegates connected with that body, yet annoyance forms no justification for the publication of false statements. The nature of Barker's charges will be sufficiently understood from Mr. Markham's replies, which are to the following effect:—"The true facts are that not only has one of the secretaries of the Miners' Union, in writing, but subsequently a deputation of the men have demanded an advance of wages, a reduction of the hours of labour, and an alteration of the weight from 28 to 21 cwts., with a corresponding reduction of one-fourth of the prices now paid. These were fair and proper questions for consideration, and if the Miners' Union had never existed they would probably have been settled to the mutual satisfaction of both masters and men." Secondly—"The check-weighmen at Springwell were discharged for their continual interference with our workpeople, by endeavouring to induce them to join the Miners' Union, for making use of our office for filling up and distributing the Union rule books, for collecting money on our premises, and subsequently on the road to the office, and for taking a most active part in endeavouring to establish the Union. But when the check-weighmen were discharged notices were posted at the pit that the workmen could appoint other men in their places." Thirdly, "No workman has been summoned, or put into the County Court, except those who distinctly stated that they would not give up possession of their houses at the expiration of their month's notice; and no person has been charged double rent who gave up possession of his house at the termination of his month's notice. The company let their houses on condition that they shall be given up, if required, on seven days' notice, and under the agreement we have power to retake possession. Since September 133 families have left our houses, and the company have permitted 59 families to overhold their cottages beyond their month's notice." The Staveley Company have now a most powerful body of 1278 non-union men, who are increasing in number, influence, and power from day to day. The Cornish miners "are well satisfied with the work . . . and that we shall be able to improve our position very much."

MOSTYN COLLIERY.—A company has been formed to purchase this colliery, near Holywell, with the limestone and other minerals, plant, machinery, &c., necessary to work and render the property beneficial and productive. The promoters are—Messrs. John Taylor, Queen-street-place; John Lancaster, Kirkless Hall Colliery, Wigan; Isaiah Booth, Hollinwood; Thomas Part, Astley Hall, Chorley; Alfred Hewlett, the Grange, Wigan; John Phillips, Great St. Helen's; and Henry Enfield Taylor, Aberystwith.

THE COAL TRADE OF FLINTSHIRE.—However disastrous the year 1866, just expired, may have been to other commercial pursuits, it has handed over to the new year a legacy of extraordinary prosperity in the coal trade of Flintshire. Within the memory of the oldest collier in the district there never has been such a demand for coal, such a quantity raised, and such high prices obtained. We have visited lately all our large collieries, and scarcely a lump of coal is left in the stock after the working day is over. The proprietors informed us that they could dispose of as much again, and are actually obliged to refuse new orders. The price obtained in the truck on the pit bank is generally 8*s*. per ton, and 8*s*. 4*d*. to 9*s*. 2*d*. in carts. Three years back, we are informed, the prices were 6*s*. in trucks, and from 6*s*. 8*d*. to 7*s*. 6*d*. in carts—showing a rise of 2*s*. per ton in one case, and 1*s*. 8*d*. per ton in the other. The future prospects are such that in another three years the price of coals will be advanced to 10*s*. per ton for railway sale, and 11*s*. 8*d*. for land sale. In some of our most productive mines in past years the main coal is nearly worked out, and as no new openings are made to supply the deficiency it does not require a porphetic eye to foretel the certainty of such an advance in prices. That there is ample scope for the further development of our coal field no one who has studied the matter will dispute; extensive tracts—even for miles in length—have never been probed into, except by our predecessors, some 200 years ago, on the outcrop, to the deep of which vast basins lie undisturbed, containing eight or ten seams of valuable workable coals. Even old collieries, that were supposed to be exhausted, are turned to profitable account by the continual discovery of a lower series of coal measures. Take, for instance, the Bromfield Hall Colliery, near this town, where they are raising from 1000 to 1200 tons of coal per week, with a similar prospect for many years to come. There are several other defunct collieries in the neighbourhood where the upper seams are partially worked, having as good prospects as the Bromfield, and with small capital could be turned to profitable account. The old coal banks of our forefathers need not frighten anyone, for as sure as they exist, equally so is the certainty of immense treasure—in former days inaccessible—lying within easy access of present engineering skill. The high price now obtained for coals, and the increasing and pressing demand for them, ought to direct the attention of capitalists to the development of this coal field, for as a branch of trade—when managed with a view to make a profit—it will produce a higher percentage of profit than any other. No coal seam from 5 feet thick and upwards ought to cost, including every charge, more than 5*s*. per ton delivered into the railway wagons, which at the present selling price leaves 3*s*. per ton profit. A sale of 50,000 tons per annum at this rate will produce an annual profit of 7500*l*. To open out a colliery in Flintshire in every way capable of producing this quantity per annum ought not to cost more than 20,000*l*. This would produce 33 per cent. on the capital employed, and 900*l*. per annum for depreciation of plant. If such a result can be obtained at 8*s*. per ton, what will it be when coals get to 10*s*. per ton? It is now clearly proved by pits extending over five miles, that the Cannel seam continues to underlie the main coal at a depth of about 80 yards, and although it differs much in quality, yet the very poorest quality—the smooth—fetches from 12*s*. 6*d*. to 16*s*. per ton for gas purposes, and the demand for this, again, at the present day exceeds the supply. The raising of the Cannel does not cost, at the outside, more than 6*s*. 6*d*. per ton, on an average. These facts we have obtained from men practically and theoretically acquainted with the working of coal mines in all their bearings. Such being the case, we invite the attention of capitalists to the Flintshire coal fields, and we look upon a well-managed colliery in these days as one of the safest investments that can be found.—*Flint County Chronicle.*

FOREIGN MINING AND METALLURGY.

The imports of coal into Belgium in November amounted to 25,900 tons; in the first 11 months of 1866 the total imports amounted to 135,600 tons, of which 30,400 tons were imported *via* Antwerp. In the corresponding period of 1865 the imports were only 65,800 tons. The exports of coal from Belgium amounted in November to 322,606 tons, and in the first 11 months of 1866 to 3,564,500 tons; in the corresponding period of 1865 the exports footed up to 3,182,600 tons. The exports of coke from Belgium in the first 11 months of last year were 503,000 tons, as compared with 458,000 tons in the corresponding period of 1865. The general state of the Belgian collieries remains the same; the continued mildness of the weather caused some orders to be withdrawn last month, but during the late severe frost the trade revived, and prices consequently remain firm. In the basins of Charleroi and the Centre the deliveries made by water are unimportant, but, on the other hand, the deliveries made by railway continue very active. Washed coke of first quality has made 1*l*. 4*s*. per ton, and unwashed ditto 1*l*. 1*s*. 8*d*. per ton. There is scarcely anything of importance to notice in connection with the Belgian siderurgical market, which is in a very quiet state, although prices are maintained. The matter which excites the most attention at present is a possible fall in prices in England, as well as a reduction in wages, which has been proposed in that country. If the reduction talked of (1*l*. per ton) should be realised, the proceeding would be attended with considerable importance to Belgian industrials, who have often to compete with English producers. But the fall in English products is not yet decided on. The uneasiness existing in some quarters in England with reference to the progress of Belgian competition—uneasiness which has found expression in certain letters in the *Times*—has not escaped attention in Belgium. The uneasiness in question appears, however, to derive little confirmation from official Belgian statistics. The Haut-Flénu Colliery Company will pay on Jan. 27 interest for the exercise 1865 at the rate of 5 per cent. per share. The Crachet and Picquery Colliery Company (at Frameries) is paying 12*s*. per share, or 3 per cent., for the exercise 1866. The Carabinier Colliery Company (at Châtelet) is paying a dividend of 8*s*. per share in respect to the exercise 1866. The Bonne Esperance and Batterie Collieries Company is paying a dividend of 1*l*. per share for the exercise 1866. The Ougrée Colliery and Blast-Furnaces Company is paying a dividend of 10*s*. per share in respect to the exercise 1865-6. The Thy-le-Château Blast-Furnaces Company is paying interests for the past year. Meetings are announced as follows:—Esperance Collieries, Blast-Furnaces, and Rolling Mills Company, Jan. 19, at Liége; Mulheim-sur-Ruhr Mine Company, Jan. 29, at Mulheim. An adjudication for railway plant has just taken place at Brussels. Messrs. Cooper and Co., of Leeds, sent in a tender for two lots of axles, completely finished, and guaranteed to accomplish a distance of 125,000 miles; the contract price was 11*l*. per ton. Messrs. Taylor Brothers, of Paris, tendered for another lot at 10*l*. 16*s*. 8*d*. and another lot at 11*l*. 5*s*. per ton; Messrs. C. Cammell and Co. (Limited), of Sheffield, one lot at 11*l*. 15*s*. 10*d*. per ton; Messrs. J. Brown and Co. (Limited), of Sheffield, one lot at 11*l*. 15*s*. 10*d*. per ton; and the Barrow Hematite Steel Company, two lots at 12*l*. per ton.

As regards the French iron trade, it may be observed that the high price which continues to prevail for combustible renders the position of the blast-furnaces every day more critical. A stock of pig is being formed in almost every group, and if a decided revival in business does not take place in the first few months of this year many forgemasters will sustain considerable losses. Some small transactions in charcoal-made pig have been concluded at St. Dizier at 4*l*. 9*s*. 5*d*. to 4*l*. 10*s*. 5*d*. per ton. Some other transactions are said to be in course of negociation on similar terms. The demand for iron continues restricted, but prices remain unaltered. Paris has become during the last 15 years a great centre for the consumption of cast-iron, and iron employed for construction purposes, and instead of falling off the requirements of the great city appear to increase every year. Thus the quantity of cast-iron received into Paris in the first eleven months of 1866 was 19,803 tons, as compared with 14,464 tons in the corresponding period of 1865, showing an increase of 5339 tons in favour of last year. The quantity of iron introduced in the first eleven months of 1866 was 48,656 tons, as compared with 23,065 tons in the corresponding period of 1865, showing an increase of 25,591 tons in favour of last year. There has thus been a very great increase in the consumption of late, especially as regards iron. The duties which will be levied by France on steel, and steel objects manufactured in Austria, will under the new treaty of commerce, concluded between France and Austria, be lower than those named in treaties concluded with other powers; as regards the duties imposed on iron, they will be the same as those stipulated for in treaties concluded with England and Belgium. It is rather remarkable that in the tariff of duties applicable to objects manufactured in France, and imported into Austria, scarcely any allusion is made to French metallurgical products; boiler-plates and nails are alone tarified. The Graissessac United Mines Company is paying a dividend of 8*s*. per share. The Carmaux Mines Company is paying half-yearly interest on its obligations, or 6*s*. per obligation. The Hermes-Bockum Collieries Company is paying the coupons on the shares and obligations falling due on Jan. 1. Meetings are announced as follows:—Coal Agglomerates Company, Jan. 8, at Paris; Alais Forges and Foundries Company, Jan 10, at Paris; Epinac Collieries and Railway Company, Jan. 11, at Paris; Blanzy Coal Mines Company, Jan. 12, at Paris; Denain Blast Furnaces and Forges Company, Jan. 25, at Paris; and Bank of Mines, Jan. 29, at Paris.

The new year appears to have opened favourably for the foreign metal markets, with the exception of lead. Under the influence of the encouraging advices received from England, copper has been improving on all the continental "places." Thus, at Amsterdam, Dronthem has made 53 fl.; English, 47½ fl. to 48½ fl.; and Swedish, 49 fl. At Rotterdam, English has made 50 fl. to 52 fl. At Havre, Chilian and Peruvian in bars has made 80*l*.; Peruvian mineral (pure standard), 82*l*.; United States (Baltimore), 94*l*. to 96*l*.; Lake Superior, 94*l*. to 114*l*.; Mexican and Plata in bars, 72*l*.; Russian, 90*l*. to 92*l*.; old yellow copper, 54*l*. to 56*l*.; red ditto, 74*l*. to 76*l*.; and bronze, 70*l*. to 76*l*. per ton. At Antwerp, American has made 116*l*. per ton. At Paris, Chilian in plates has been quoted at 86*l*. to 88*l*.; Chilian, 80*l*.; and Corocoro mineral, 82*l*. per ton. Tin has continued an upward movement on the Dutch markets, and the tendency is firmer, especially for Banca, which has maintained itself at 50¼ fl. The following comparative table shows the deliveries in Holland during the last five years:—

Month.	1862.	1863.	1864.	1865.	1866.
January ..Blocks	5,105	9,335	5,165	4,230	11,950
February	8,465	8,665	9,190	4,987	7,959
March	4,335	7,650	6,085	9,640	17,236
April	6,766	4,638	6,377	5,660	24,192
May	9,400	4,760	6,443	3,890	22,739
June	4,650	9,172	8,928	5,900	10,579
July	34,400	14,757	25,851	27,297	4,574
August	30,637	29,764	55,520	33,611	11,525
September.....	12,119	5,453	13,950	9,450	7,950
October	12,332	6,816	9,600	10,410	32,950
November	7,265	8,150	4,318	12,300	26,250
December	3,950	4,132	4,125	12,600	9,000
Total	139,424	112,792	155,552	139,975	186,855

The stock on schedules, Dec. 29, 1866, was 131,109 blocks, as compared with 96,859 blocks Dec. 29, 1865; 68,907 blocks Dec. 29, 1864; 77,538 blocks Dec. 29, 1863; and 69,740 blocks Dec. 29, 1862. The unsold stock of the Society of Commerce, Dec. 29, 1866, was 64,534 blocks, as compared with 93,770 blocks Dec. 29, 1865; 79,404 blocks Dec. 29, 1864; 52,966 blocks Dec. 29, 1863; and 61,928 blocks Dec. 29, 1862. At Rotterdam, Billiton has made 49½ fls. At Amsterdam the same price has been realised, and at Amsterdam Banca has made 50 fls. to 50⅛ fls. At Paris the quotations have been—Banca, 90*l*. to 92*l*.; Straits, 88*l*.; and English, 86*l*. to 88*l*. per ton. At Antwerp, Banca has brought 52 fls. per cwt. At Havre, Banca has made 87*l*. to 88*l*.; Detroit, 86*l*. to 87*l*.; and Peruvian, 68*l*. to 80*l*. per ton. Lead has been neglected, and former rates have been only nominally maintained. At Rotterdam, Stolberg has made 11¼ fls. At Paris, Spanish saumons have brought 20*l*. 8*s*. to 21*l*. 12*s*.; French, ditto, 20*l*. to 20*l*. 16*s*.; and German, 20*l*. 16*s*. per ton. At Havre, Spanish has realised 19*l*. 16*s*. to 20*l*., and lead from other sources 19*l*. 16*s*. per ton. The exceptional favour which lead has enjoyed for some weeks past does not appear to have yet subsided, and the advices received from the controlling markets indicate an excellent state of affairs. Besides numerous and important purchases to meet the requirements of consumption, speculative transactions have given a considerable impulse to the market. At Paris rough Silesian has made 23*l*. 4*s*. to 24*l*.; and lead from other sources, 22*l*. 16*s*. to 23*l*. 12*s*. per ton. At Havre the quotation for zinc has been 22*l*. 16*s*. to 23*l*. 4*s*. per ton.

THE LONDON STOCK AND SHARE COMPANY.—The weekly sale by public auction of English and Foreign Stocks, ordinary and preference railway shares, debentures, Lloyd's bonds, bank, mine, insurance, and other shares, took place at the Baltic Sale Room, South Sea-house, on Tuesday. The fair and impartial way in which Mr. JOSEPH ASPINWALL continues to conduct these sales elicits general approval: and the public appreciation of this new institution is daily increasing, for by its agency buyers and sellers of securities and shares of any description, whether marketable or otherwise, are provided with an inexpensive negociating medium, and at the same time without incurring the loss that, under ordinary circumstances, is incurred in the difference between buyer's and seller's quotations. Take, as an example, the case of an investor who wishes to purchase shares in St. John del Rey or any other dividend-paying property. His broker would "make the price" 52 to 54—that is, the investor could (plus commission) obtain the shares at 54; but supposing he desired to sell, and no alteration whatever had taken place in the market value, to do so he would have to incur a positive loss (in addition to the commission) of no less than 2*l*. per share. Other instances might be cited in which, "the price being made wider"—as it is termed—considerably greater loss would be incurred, although no variation in the market value had taken place. Another advantage offered by these weekly sales is that holders of shares are provided with a means of sale. It is a well-known fact that there are many really sound companies the shares of which have no market existence, and, therefore, however much a holder may wish to realise he has no chance of doing so, although at the time there may be others equally desirous of investing capital in those very enterprises. The London Stock and Share Company provides this long-felt want of a protective means of communication between such parties; and hence it is that, added to other reasons, the business of the company is so largely increasing as to compel the directors to put forward the statement that "the public sales will shortly be held twice a week." Among the lots sold on Tuesday the following prices were realised:—Grand Central Railway of Venezuela, 50*l*. each, 35*l*. paid (bearing an interest of 9 per cent. guaranteed by the Government), 5*s*.; Metropolitan Extension C Stock (London, Chatham, and Dover Railway), 20 per cent.; Marseilles Extension Railway and Land Company, 20*l*. each, fully paid, 2*l*. 15*s*. to 3*l*.; Ottoman Railway Bonds, 100*l*. each, second issue, 26*l*. 10*s*.; Royal Swedish Railway, 5*l*. each, fully paid, 3*s*. 3*d*. to 4*s*.; ditto, 4*l*. each, fully paid (7 per cent. preference), 20*s*. to 22*s*.; Varna Railway, 20*l*. each, fully paid (interest at 5 per cent. per annum

guaranteed by the Turkish Government), 4*l.* 2s. 6d. to 4*l.* 10s.; Alexandra Hotel (Hyde Park), 10*l.* each, fully paid, 4*l.* 10s. to 5*l.* 5s.; Anglo-Brazilian Gold Mining, 1*l.* each, 2s. paid, 5s. 6d. to 6s.; Bahia Steam, 10*l.* each, fully paid, 6*l.*; Bedford Hotel, 10*l.* each, fully paid, 2*l.* 15s.; China Steam and Labuan Coal, 20*l.* each, fully paid, 5*l.* 5s.; ditto debenture, 50*l.* (interest 6 per cent).. 26*l.* 10s.; Confederate States Loan (1864) Bonds, $1000 each, 23s. to 26s.; Credit Foncier of Poland, Warsaw, Mortgage Bond, 3000 silver roubles, 11*l.* 5s. to 11*l.* 10s.; ditto 150 roubles, 24s.; Don Pedro North del Rey Mine, 1*l.* each, 14s. paid, 17s. 6d.; Dun Mountain Copper Mine, 1*l.* each, fully paid, 1s. 4d. to 1s. 7d.; East Indian Coal, 10*l.* each, fully paid, 6*l.*; East Wheal Lovell, 9*l*; Gas Products Utilising, 10*l.* each, 8*l.* paid, 8*l.* 15s.; Gladbach Zinc, 10*l.* each, fully paid, 7s. 6d.; Guadaloupe de los Angelos Gold and Silver Mine, $1 each, fully paid, 9s.; Liverpool and London Hotel, 20*l.* each, 8*l.* paid, 26s.; London Co-operative Coal, 1*l.* each, 15s. paid, 3s. 6d. to 4s. 3d.; London and County Coal, 5*l.* each, fully paid. 19s.; London and County Land, 10*l.* each, 2*l.* paid, 25s. to 32s.; Maratime Insurance, 10*l.* each, 2*l.* paid, 21s.; Martin's Patent Anchor, 5*l.* each, 4*l.* paid, 1d.; Mount Braley Gold and Silver, $200 each, fully paid, 9s. 6d.; Oil Seed Crushing, 20*l.* each, 15*l.* paid, 13s. to 15s.; Palace and Burlington Hotel, 10*l.* each, 5*l.* paid, 2*l.*; Poyasian Land, Certificate for 1000 acres, 4*l.* 12s. 6d.; ditto, 500 acres, 2*l.* 12s. 6d.; Seed Crushing "Trial," 100*l.* each, fully paid, 16*l.*; Star and Garter Hotel, 10*l.* each, fully paid, 24s. to 35s.; Tahiti Cotton and Coffee Plantation, 10*l.* each, fully paid, 5*l.* to 5*l.* 5s.; Vallanzasca Gold Mine, 1*l.* each, 17s. 6d. paid. 16s. 6d.; Ventilating Furnace Bar, 10*l.* each, fully paid, 1*l.*; Westminster Palace Hotel, 10*l.* each, fully paid, 5*l.* 10s.

CAST-STEEL, AND HOW TO MAKE IT.—The qualities of cast-steel depend on various modifications in the process of melting and the admixture of certain substances to the steel or iron in the crucible. I propose to review and discuss, in this communication, the value of some of the most important ingredients that have been used with success in the manufacture of cast-steel. The substance most extensively used is the peroxide of manganese. Before giving my individual idea on this important subject, I must refer the reader to the following extract from Percy's Metallurgy:—"It might have been expected that the action of manganese upon cast-steel would, long ago, have been clearly ascertained; but, so far as I know, this unfortunately is not the case. It can only be determined by accurate chemical analysis. Steel, it is maintained, which, if melted *per se*, can neither be worked satisfactorily under the hammer nor welded, becomes both malleable and weldable by fusion with a small proportion of manganese. The carbon which the manganese may contain cannot, obviously, be concerned in this action, which must be exclusively due to the metal itself." Is the action mechanical or chemical, or both? At my request, Mr. E. F. Sanderson prepared for me specimens of cast-steel, made from the same bar-steel, melted without and with manganese, in the manner usually practised in Sheffield. They were in the form of ingot-ends, showing fracture, and were accompanied with specimens of the same steel tilted to a smaller size. Analyses of a portion of the ingot-ends have been made in my laboratory by Mr. A. Dick, the carbon alone not having been determined. The results are as follows:—

	Melted, *per se*.	With manganese.
Iron	99·05	99·09
Manganese	0·03	0·10
Silicon	0·24	0·24
Sulphur	0·05	0·07
Phosphorus	0·02	0.02
Aluminium	0·12	0·01
Carbon not determined	—	—
Total	99·51	99·53

The analyses were made with the utmost care, and the reagents employed were specially tested as to purity. Both were steels perfectly dissolved in hydrocloric acid, without any trace of residue. Not a trace either of lime or magnesia could be detected. The effect of fusion with manganese appears to have chiefly consisted in removing 0·11 per cent. of aluminium, and adding 0·07 per cent. of manganese. But it must not be supposed that I presume to draw any conclusions from two analyses only. I present them because the result may be useful to others who may be induced to investigate this interesting subject in a proper manner. The late Mr. T. H. Henry entertained the opinion that a certain proportion of silicon was essential to good steel, and was as important as carbon. In a communication to Mr. E. F. Sanderson, concerning the action of manganese, he thus expressed himself:—"The manganese which you use, if it be such as I have seen, is a carburet of the metal, containing a considerable quantity of silicon; and it must not be forgotten that you introduce these substances into your steel by fusing them together. Now, there is no doubt that steel becomes more fusible, more uniform and homogeneous in its texture by its addition. I do not however, believe that this is owing to the metal (manganese) which is alloyed with the iron, but to the compound that you add. It is a flux at a high temperature, which unites with the steel, and although it may improve its smoothness and uniformity of composition, so to speak, yet I have no doubt that it must affect its elasticity in some degree." Mr. Henry lays particular stress on the comparatively large proportion of silicon which he found in hoop L-iron. Mr. Parry has recently investigated the properties of steel alloyed with manganese, and the conclusions at which he has arrived are that it is a corrective of red-shortness, so that cast-steel, which can only be hammered or rolled at a low red heat, may, when alloyed with from 0·5 to 1·0 per cent. of manganese, be hammered and rolled at a much higher, and even welding temperature, but that the presence of manganese in sensible quantity in steel renders it more brittle while cold. Mr. Parry, therefore, suggests that it is desirable to avoid having recourse to manganese, and that, in order to do this, it will be necessary to employ more powerful machinery for rolling than is now generally in operation.—A. L. FLEURY, Professor of Technology, &c., Philadelphia.—*Mining and Manufacturing Journal*, Pittsburgh, U.S.

CARNARVONSHIRE CONSOLIDATED LEAD MINING COMPANY (LIMITED)—CAUTION.—A BILL in CHANCERY having been FILED for OBTAINING a CANCELLATION or RELINQUISHMENT of SHARES REGISTERED in the NAMES of Mr. BAKER LELEAN or his nominees, or of parties claiming through them, and for other equitable relief in respect of transactions and dealings of the said Mr. Baker Lelean in connection with the formation of this company, ALL PERSONS are hereby CAUTIONED AGAINST PURCHASING ANY SUCH SHARES.

The numbers of the shares referred to are believed to be from 2103 to 3598, both inclusive; and 4997 to 5000, both inclusive.

Further information may be obtained on application to the Secretary, at the company's office, Telegraph Chambers, 2, Telegraph-street, Moorgate-street, London. By order of a Committee of the Directors,

January 11, 1867. ROGER FENTON, Chairman.

CARNARVONSHIRE CONSOLIDATED LEAD MINES COMPANY.

TO THE SHAREHOLDERS.

LADIES AND GENTLEMEN,—It would have been but decent in the committee of directors, who are involving the company in protracted and expensive legal proceedings—having filed a Bill in Chancery without consulting you, or even calling a meeting of the Board to obtain its authority or concurrence—to await the regular process of the Court, and not, meanwhile, discuss the matters at issue in a public journal. They seem, indeed, to have felt this for a moment, for Mr. Warton, who is their representative, opens his statements with an averment that they do not intend to do so. Their sense of propriety, however, soon passes away, for they forthwith proceed to criticise and discuss my statement of facts, one of their number having the talk all to himself..

1.—They allege I have "carefully abstained from bringing forward the real point involved," which they go on to say was my "apparently acting as agent in effecting a sale of the mines." A reference to my letter of Dec. 27 will show how far these gentlemen are capable of discerning facts, or how incapable they are of stating them correctly. It is stated in par. 2 of my letter that I entered into a bargain with the owner for the purchase of the mines, which bargain was completed on or about Aug. 20. In the next paragraph I state that on the 8th of October—that is seven weeks afterwards—a company was formed to purchase them of me and work them. If this is evading "the real point involved"—*i.e.*, my buying for the company—then these gentlemen state the truth; otherwise, not.

2.—It is alleged, in par. 2 of the statement signed by Mr. War on, that I "craftily interposed" myself as the vendor of the mines," and Mr. Darwent says (par. 2)—"The £2000, which had already been paid, as was supposed, to Mr. Thomas, as the vendor," &c. How baseless these statements are is seen (first) in the fact that the whole transaction between myself and the company as to the sale of the mines was fully set forth in the minutes of proceedings, always open upon the table at the meetings of directors, and perused, or which ought to have been perused, by them before they allotted me shares, and paid me money for the purchase of the mines; and (second) in the fact that, on the 26th of September, before any company was formed, I wrote to Mr. Darwent and Mr. Towle, two of the present directors, who plead ignorance that the mines had been bought by me, in the following words:—"I send you, by this post, a prospectus of an extraordinary mining property, which I have had the good fortune to obtain at a price that bears no proportion to its value." I had, while negociating for the purchase of the mines, stated to Mr. Fenton, on a day when I met him at St. Leonard's, that I had just returned from Wales, where I had been looking at a valuable mining property, and that if I could come to terms with the owner I should purchase it, and afterwards form a company. to buy the mines and work them, asking him to take an interest in it, and become a director. Mr. Pierce and Mr. Thomas, the other two directors, also knew, beyond all doubt, that I was the purchaser of them. Mr. Thomas says, in a letter addressed to me, "You buy of me, and you sell to the company."

How this committee of directors can, in the face of these facts, make the statements which they have done of my being an agent, I leave you to say. There are many other things in the statements of the directors, signed D. H. Warton and J. Major Darwent, as far from the real facts of the case as those I have here noticed, but I have given a sufficient proof of the danger of relying upon anything these gentlemen state; and I shall not henceforth notice anything they may state in any public journal. I am, your's obediently,

11, Royal Exchange, London, E.C. BAKER LELEAN.

CARNARVONSHIRE CONSOLIDATED LEAD MINES COMPANY.

If Mr. Darwent had not gratuitously dragged me into the mass of his misrepresentations, in last week's Journal, I should not have noticed them, however strong the temptation to do so. I must pen a line, however, to show with how little reason he seeks to prejudice me in the opinion of the shareholders. He writes—"The salary of the secretary was put down at £250 a-year;" the object being to represent the salary as excessive. Mr. Darwent's code of morals does not recognise the fact that the *suppressio veri* is as criminal as the *suggestio falsi*, or he would have added that this salary was, according to the resolution by which the secretary was appointed, to include the cost of any aid—such as a clerk or clerks, &c.—necessary to the proper discharge of the duties of secretary. How much that would leave the secretary of a joint-stock company any one may readily calculate. There is a similar suppression of fact in what he says about the rent of offices; but that is not my affair. WILLIAM CARPENTER.

CAPT. RICH, BODMIN, CORNWALL, being in the centre of the mining districts of Devon and Cornwall, and having had 25 years' experience in the management and inspection of mines, OFFERS HIS SERVICES to INSPECT and REPORT on MINES in either of the above counties. Orders promptly attended to.

King's College, London.

KING'S COLLEGE, LONDON—DEPARTMENT OF APPLIED SCIENCES.—LECTURES will COMMENCE on THURSDAY, the 24th January. New students must present themselves on the preceding Tuesday.

These lectures are adapted for those who wish to enter the Architectural, Engineering, or Mining Professions, or who wish to engage in Manufacturing or Chemical Processes.

Students who have passed two years in this department, and, in addition, not less than one year in practice under a civil or mechanical engineer, are, by a special order of the Secretary of State for India in Council, admitted to be candidates for appointments to the Engineering Establishment of the Department of Public Works in India.

Subjects taught:—Mathematics, Natural Philosophy, Arts of Construction, Manufacturing Art and Machinery, Land Surveying and Levelling, Geometrical and Engineering Drawing, Chemistry, Geology and Mineralogy, Workshop, and Photography. There are lectures on Divinity.

For information, apply personally, or by letter, marked outside "Prospectus," to J. W. CUNNINGHAM, Esq., Secretary.

Geology—King's College, London.

GEOLOGY—KING'S COLLEGE, LONDON.—PROF. TENNANT, F.G.S., will COMMENCE a COURSE of LECTURES on GEOLOGY on FRIDAY, January 25, at Nine A.M. They will be continued on each succeeding Wednesday and Friday at the same hour. A shorter course will be given on Wednesday evenings from Eight to Nine. First lecture, Jan. —Text-book: Lyell's Elements of Geology. R. W. JELF, D.D., Principal.

THE LONDON STOCK AND SHARE COMPANY (LIMITED).

CHARLES CAPPER, Esq., M.P.—Chairman.

J. WATSON KNIGHT, Esq.—Deputy-Chairman.

The WEEKLY AUCTION of STOCKS and SHARES at the Baltic Sale Room, Threadneedle-street, on TUESDAY, the 15th inst., will commence at Twelve o'clock precisely.

Every description of stock and share business is daily negociated by the company.

The amount of orders received each week having become too bulky for a single auction, the public sales will shortly be held twice a week.

Catalogues and the Weekly Circular may be had on application at No. 1, Royal Exchange-buildings.

TO COAL OWNERS, AND OTHERS.

THE LONDON PATENT COAL COMPANY are now GRANTING LICENSES for the USE of their PATENT for the UTILIZATION of COAL DUST. All communications to be addressed to the Managing Director, 26, Martin's-lane, Cannon-street, E.C.

WANTRD, by a MANUFACTURER of FINISHED IRON, a GENTLEMAN COMPETENT to TAKE the ENTIRE CHARGE of the OFFICE DEPARTMENT. Must be a good correspondent and accountant.—Application to be made by letter, stating qualifications and salary expected, accompanied by references or copies of testimonials, to "B. C. D.," care of Messrs. Pottle and Sons, 14, Royal Exchange, London, E.C.

WANTED, to go to Portugal, a MAN thoroughly versed in the GETTING and DRESSING of COPPER ORES. A good character indispensable. Salary £100 a-year to commence with. Expenses out and home again paid.—Apply, sending references, to Mr. J. T. JOHNSON, Mining Engineer, Lichfield.

A MINING AND CIVIL ENGINEER of position, and who can furnish the highest references, WILL LEAVE FOR COLORADO, NEVADA, and CALIFORNIA during the ENSUING WEEK, and is OPEN to REPORT on or SURVEY ONE or TWO MINERAL PROPERTIES. To save trouble, no business will be entertained unless part payment be made in advance, and balance on delivery of report guaranteed.—Apply to "C. E.," care of Messrs. Barker and Co., Castle-court, Birchin-lane, London, E.C.

A GENTLEMAN of large COMMERCIAL EXPERIENCE in Spain, New Granada, Ecuador, Peru, &c., would be WILLING to UNDERTAKE ANY COMMISSIONS in CONNECTION with SPAIN, SOUTH AMERICA, or elsewhere. Possesses a good knowledge of mining affairs and general superintendence.—Address, "Ojalá," care of Messrs. Barker and Co., Castle-court, St. Michael's-alley, Cornhill, London, E.C.

A GENTLEMAN having an extensive connection with merchants manufacturers, and others, would be GLAD to UNDERTAKE the SALE of PATENTED ARTICLES or INVENTIONS, upon commission.—Apply to Mr. W. T. RAWLE, patent and mining agent, 8, Small-street, Bristol.

CAPITAL—PAPER TRADE.—An OPPORTUNITY occurs for INVESTING about £20,000 in the ESTABLISHMENT of a PAPER MANUFACTORY abroad, which it is anticipated will return about 60 per cent. nett per annum. Labour and materials cheap and plentiful. Principals or their solicitors alone treated with.—Address, "M. P. L.," MINING JOURNAL office, 26, Fleet-street, London, E.C.

TO CAPITALISTS AND OTHERS.—The CO-OPERATION of a GENTLEMAN is REQUIRED, who can advance £3000, to COMPLETE the DEVELOPMENT of an important SLATE QUARRY in NORTH WALES. The benefit accruing to the mortgagee will be from 30 to 40 per cent.—Apply by letter, to "W. A. C.," MINING JOURNAL office, 26, Fleet-street, London, E.C.

TO MINE PROPRIETORS.—The ADVERTISER, being in a position to take advantage of the present improving aspect of the Money Market, is WILLING to CO-OPERATE with the OWNER or LESSEE of a good BRITISH COPPER MINE, with a view to OBTAIN the NECESSARY CAPITAL for DEVELOPING IT.—Address by letter, "C. F.," MINING JOURNAL office, 26, Fleet-street, London, E.C.

CARBONATE OF BARYTES WANTED, in large or small parcels. Quote price and quantity to Mr. W. BOUSTRED, Auctioneer, Pontesbury, Salop.

A SILVER-LEAD MINE: has been worked by the present proprietor for nearly two years at his sole cost. Discoveries have been made yielding returns, which may be continued indefinitely at an inconsiderable outlay. CO-OPERATION is DESIRED, to the extent of £500, in one or more sums, on the basis of half profits. Principals only will be treated with.

Address, "Argentum," care of Wm. Coleman, Esq., No. 53, Moorgate-street, London.

COPPER AND SILVER-LEAD MINING IN IRELAND.—The OWNER of an IMMENSE DEPOSIT of FINE COPPER, and of a fine lode of SILVER-LEAD, will be glad to MEET with a GENTLEMAN and CAPITALIST, who may wish to REALISE a LARGE FORTUNE, to work them for mutual advantage.—Address, "R. M. C.," MINING JOURNAL office, No. 26, Fleet-street, London, E.C.

HIBERNIAN IRON ORE.—The ADVERTISER has completed the investigation of an immense body of fine MAGNETIC and SPATHIC IRON, of extraordinary quality, and in sufficient abundance to supply the United Kingdom and the Colonies for ages to come, DESIRES CO-OPERATION. Iron shipbuilding on the spot could be advantageously undertaken, as fine incorrodible iron, superior to all others for strength and ductility, can be manufactured to any extent. A sample of the iron, which has been exposed to the action of the atmosphere for 390 years, and is still free from rust, can be submitted.—Address, "R. M. C.," MINING JOURNAL office, No. 26, Fleet-street, London, E.C.

VALUABLE PROPERTY AND INVESTMENT IN ITALY.—FOR SALE, an ESTATE of about 160 acres, with superior residence, labourers' dwellings, and all other necessaries on the grounds, situated 15 miles from one of the principal cities on the main posting road. The value of this property is enhanced by the existence on it of several PETROLEUM WELLS, which could be most extensively developed.—Plans can be seen, and full particulars obtained, by applying to FREDERICK BRADLEY, Esq., Solicitor, No. 127, Fenchurch-street, E.C.

FOR SALE, and may be seen at the Ashburton Mines, ONE 56 in. PUMPING ENGINE, with TWO 11 ton CORNISH made BOILERS. ONE 40 in. PUMPING ENGINE, only made a short time, and as good as new, with an 11 ton BOILER. A 24 in. WHIM ENGINE, with stamps attached. ONE 11 ton BOILER. Several WATER-WHEELS of various sizes, one with a very excellent drawing machine attached. Pumps and materials of all sorts and sizes.—Application may be made to Mr. W. MATHEWS, engineer, Tavistock, or can be seen on application to people in charge of the mine.

TO CONTRACTORS.—FOR SALE, TWO HUNDRED TONS of NEW DOUBLE HEADED RAILS, 80 lbs. per yard. THREE HUNDRED TONS of NEW CONTRACTORS' RAILS, 56 lbs. per yard. TWENTY-EIGHT 20 inch PUMPS, in 9 feet lengths.—Apply to "Box 75," Post-office, Swansea.

TO ENGINEERS, METAL BROKERS, AND OTHERS.—FOR SALE, at a considerable reduction from the original cost, TWO PAIRS of powerful LOW-PRESSURE ENGINES, cylinder 48 in. diameter and 6 ft. stroke, now lying in the East India Import Dock.—For particulars, apply at the offices of the Oriental Inland Steam Company, No. 6, Billiter-street, London, E.C.

LLANFAIR GREEN AND BLUE SLATE QUARRY.—Manager, T. HARVEY, Esq.—TO BE SOLD, FIFTY SHARES at a very considerable discount—Address, "N. K. H.," MINING JOURNAL office, 26, Fleet-street, London, E.C.

BRECONSHIRE, MID-WALES.—SLATE QUARRIES TO LET, near NEWBRIDGE-ON-WYE.—Apply to Mr. PRATT, Crickhowell.

TO BE LET, in the SOUTH WALES COAL BASIN, the COAL and IRONSTONE UNDER the FARMS of CWM GARNANT, GORSE GARNANT, and BRYNCETHIN, in the parish of BETTWS, in the county of CARMARTHEN. The property is connected by rail with the shipping-ports of Llanelly and Swansea.—For further particulars, apply to Messrs. FIELD, ROSCOE, and Co., 36, Lincoln's Inn-fields; or to Mr. WILLIAM ROSSER, land agent, Llanelly.

NICHOLLS, MATHEWS, AND CO., ENGINEERS, BEDFORD IRONWORKS, TAVISTOCK.

MANUFACTURERS of STEAM ENGINES of EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS of EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK of EVERY DESCRIPTION.

ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.

Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

JOHN HOCKING AND SON, ENGINEERS, REDRUTH, CORNWALL, CALL the ATTENTION of COLLIERY PROPRIETORS and WATERWORKS COMPANIES to the present favourable opportunities for the purchase of almost every description of CORNISH PUMPING ENGINES, at low rates. Plans, estimates, valuations, removal, &c., of every description of mining machinery undertaken.

PATENT FLEXIBLE TUBING, AND BRACTICE CLOTH FOR MINES, MANUFACTURED BY ELLIS LEVER, PATENTEE, WEST GORTON WORKS, MANCHESTER.

RAILWAY CARRIAGE COMPANY (LIMITED) ESTABLISHED 1847. OLDBURY WORKS, NEAR BIRMINGHAM.

MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.

Passenger carriages and wagons built, either for cash or for payment over a period of years.

RAILWAY WAGONS FOR HIRE.

CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.

LONDON OFFICES,—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

THE BEVERLEY IRON AND WAGON COMPANY (LIMITED).

MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, WROUGHT and CAST IRON CARRIAGE and WAGON WHEELS, AXLES, HAMMERED USES, and HEAVY SMITHS' WORK for ENGINEERS, &c. BRASS and IRON FOUNDERS. MAKERS of PORTABLE FARM RAILWAYS, TURN-TABLES, CROSSINGS, SWITCHES, &c. AGRICULTURAL MACHINISTS. MANUFACTURERS of FIELD, ROAD, and BARN IMPLEMENTS, PATENT LORRY, CART, and CARRIAGE WHEELS, with WOOD or IRON NAVES. REAPING MACHINES, CLOD CRUSHERS, CORN MILLS, &c. SAW MILL PROPRIETORS. GENERAL TIMBER CONVERTERS for home and foreign RAILWAYS, STATIONS, BARRACKS, EXHIBITIONS, &c.

IRONWORKS BEVERLEY, YORKSHIRE.

JAMES DEWHIRST, Sec.

THE BIRMINGHAM WAGON COMPANY (LIMITED) MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.

EDMUND FOWLER, Sec.

WAGON WORKS,—SMETHWICK, BIRMINGHAM.

*** Loans received on Debenture; particulars on application.

London Agent—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED), MANUFACTURERS of RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK, used in the CONSTRUCTION of RAILWAY ROLLING STOCK.

CHIEF OFFICES, 3 and 4, EXCHANGE BUILDINGS, BIRMINGHAM.

BOWLING IRON COMPANY, BRADFORD, YORKSHIRE.

BEST CRUCIBLE CAST-STEEL TYRES, AXLES, CRANK AXLES, BOILER PLATES,

Also COG WHEELS, and other CASTINGS.

This company is prepared to furnish the above-mentioned articles in CAST STEEL of a very superior quality, made principally from their own well-known

"BOWLING IRON."

Also BOWLING WROUGHT-IRON SOLID WELDLESS TYRES, of any size and to any section.

BAGILLT OIL COMPANY (LIMITED), FLINT.

MANUFACTURERS OF BLACK GREASE FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON.

TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).

LUBRICATING OIL, 1s. PER GALLON (Casks free).

GLAHOLM AND ROBSON, HENDON PATENT ROPERY, SUNDERLAND,

MANUFACTURERS of ALL DESCRIPTIONS of STEEL, IRON, and HEMP ROPES for COLLIERIES, SHIPS, &c.

Swan Rope Works.

GARNOCK, BIBBY, AND CO., CHAPEL STREET, LIVERPOOL.

MANUFACTURERS of FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.

MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope.

WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

Patent Flat and Round Wire and Hemp Ropes, &c.

JOHN AND EDWIN WRIGHT, PATENTEES, CITY OFFICE, 19, LONDON STREET, E.C. ESTABLISHED 1770.

Manufacturers of every description of

IMPROVED PATENT FLAT AND ROUND WIRE ROPES,

From the very best quality of charcoal iron and steel wire.

PATENT FLAT AND ROUND HEMP ROPES.

SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel), WIRE, HEMP, FLAX, ENGINE YARN, COTTON WASTE, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.

UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.

No. 2, OSWALD STREET, GLASGOW.

CITY OFFICE, No. 19, LONDON STREET, LONDON.

NEW WORK ON COAL MINING.

Just published, in one volume, post 8vo., illustrated, price 7s. 6d., cloth,

A TREATISE ON COAL AND COAL MINING. By WARINGTON W. SMYTH, M.A., F.R.S., Chief Inspector of the Mines of the Crown, and of the Duchy of Cornwall.

London: Virtue and Co., 26, Ivy-lane, Paternoster-row.

Now ready, roan tuck, gilt edges, price 6s. (postage 4d.),

WEALE'S ENGINEER'S, ARCHITECT'S, AND CONTRACTOR'S POCKET-BOOK for 1867. Considerably improved, with many additions. Besides the usual vast mass of rules, formulæ, tables, &c., will be found a Diary of Events and Data, a General Calendar, a Gas Engineer's Calendar, Obituary of Engineers, &c., 1865-6, List of Members of the Institutes of Civil Engineers and British Architects; Tables for the Reciprocal Conversion of British and Metric Weights and Measures, &c., &c., with eight copper plates.

London: Lockwood and Co., 7, Stationers' Hall-court, E.C.

Now ready, price 5s., by post 5s. 4d.,

THE MINES OF CORNWALL AND DEVON: STATISTICS AND OBSERVATIONS, for 1865. By THOMAS SPARGO, Mining Engineer, Stock and Sharebroker, Gresham House, Old Broad-street, London, E.C.

NOTICE.—CAPT. S. M. RIDGE, of LLANIDLOES, MONTGOMERYSHIRE (late manager of the Bryngpastig and Cwm Fron Mines, and others, in Shropshire and Wales), is NOW OPEN to INSPECT and faithfully REPORT UPON ANY LEAD MINE in either of these localities that may be confided to his care, having had better than 30 years' experience in lead mining, as miner and agent.—Address, Capt. S. M. RIDGE, Llanidloes, Montgomeryshire.

MINING OFFICES, MANCHESTER.

THOMAS MOLYNEUX AND CO., MINE AGENTS AND SHAREBROKERS. Reliable information can be obtained as to purchase and sale of shares.

Offices of the Ellen United Copper and Zinc Mining Company (Limited), and Hazael Grove Silver-Lead Mining Company (Limited). THOMAS MOLYNEUX, secretary, 28, Princess-street, Manchester

MANCHESTER, AND WEST END OF LONDON

MR. W. HANNAM, MINING, SLATE QUARRYING, INSURANCE, AND GENERAL SHAREBROKER.

ROYAL INSURANCE BUILDINGS, KING STREET MANCHESTER; and 449, STRAND, LONDON, W.

INSTANTANEOUS COMMUNICATION with the STOCK and MINING EXCHANGES, avoiding the delay and annoyance of visiting the City to ascertain prices. A Monthly Investment Circular on application.

THE DYLAIS COAL AND IRON COMPANY (LIMITED).

Incorporated, with Limited Liability, under the Companies Act, 1862.

Capital £60,000, in 6000 shares of £10 each.

Deposit £1 per share on application, and £1 further on allotment. Subsequent calls £1 per share, at intervals of not less than three months.

It is estimated that not more than £5 per share will be called up. Nearly half the capital is already taken by the directors and vendors.

DIRECTORS.

HOWEL GWYN, Esq., M.P. for Brecon, Dyffryn House, Neath, Glamorganshire.
W. L. BANKS, Esq., Pontywal Hall, Breconshire (Chairman of the Neath and Brecon Railway, and of the Brecon and Merthyr Railway).
FREDERICK HARRISON, Esq., 15, Carlton Villas, Maida Vale, London (Director of the London and County Bank, London, and of the London and Liverpool and Globe Insurance Company, London).
JOHN J. WILLIAMS, Esq., M.D., Magistrate for the County of Brecon (Director of the Brecon and Merthyr Railway), Mount-place, Brecon.
GEORGE B. MURLY, Esq., Langport, Somersetshire (Director of the Hirwain Coal and Iron Company, Limited).
THOMAS C. HINDE, Esq., Ynispenllwch, near Swansea (Chairman of the Ynispenllwch Tin-plate Company, Limited; Director of the Hirwain Coal and Iron Company, Limited.

(With power to add to their number.)

BANKERS—National Provincial Bank of England, Brecon.
" Provincial Banking Corporation, Swansea and Neath.
SOLICITOR—Mr. J. R. Cobb, Brecon.
AUDITORS—Thomas Frater, Esq., Manager of the National Provincial Bank of England, Brecon.
" Messrs. W. H. Williams and Co., Exchange, Bristol.
BROKERS—The Members of the Bristol Stock Exchange, Bristol.
SECRETARY—Mr. Thomas Cook Davies, No. 2, Mount street, Swansea.
REGISTERED OFFICE,—2, MOUNT STREET, SWANSEA.

PROSPECTUS.

This company is formed for the purpose of leasing and working the minerals contained in the Onllwyn, and the Rhydffosddu, Cefn-yr-Erw, Castell Coch, and other estates, at the head of the Dylais Valley, and situate partly in Glamorganshire and partly in Breconshire.

These properties together form a total area of nearly 1000 acres, all in a ring fence. The Onllwyn property is held for a term of 53 years, and the Rhydffosddu, Cefn-yr-Erw, and Castell Coch Estates for a term of 39 years, at royalties of 8d. per imperial ton on all coal and ironstone, and proportionately low rates for fire-clay, building stone, &c. The dead rents average £1 per acre, and all the leases are determinable by three years' notice at the option of the lessees, but not by the lessors.

The Onllwyn estate consists of nearly 700 acres, and comprises in the section the Upper Four-feet coal, the Eighteen-feet, the Nine-feet, the Lower Four-feet, and other veins, making a total workable thickness of between 30 and 40 feet.

Under the whole of this property are also contained the series of argillacious ironstone belonging to the north out-crop of the South Wales mineral basin. All the seams of coal and ironstone are fully proved by existing workings, and are shown in the map of the Ordnance Survey. The coal is a pure anthracite, and is admirably adapted for smelting iron, for malting, lime burning, hop drying, and heating stoves. At present it is not largely used in this country for steam purposes, chiefly owing to the defective communications with the districts in which it is found. Recent railway extensions will, however, enable this coal to compete fairly in the markets of the world, and its extraordinary and valuable properties will now, unquestionably, become as well known and appreciated for ocean steam navigation and for locomotive and stationary engines in this country as they have long been in the United States of America. It is absolutely smokeless, makes little or no ash or clinker, evolves the most intense heat in combustion, and is unapproachable by any other description of coal for strength and durability.

From its great density and hardness, it is admirably adapted for long steam voyages. It stows in less compass than any other coal in the world, is unaffected by exposure to weather or climate, and is entirely free from all danger of spontaneous combustion or of explosion.

For iron-making purposes it is invaluable: the pig-iron smelted by this coal has long been locally celebrated, and now that through railway routes are coming into operation in the district, it is greatly in demand at high prices in Staffordshire and other parts where first class pig-iron is needed.

On this property are two well-built blast-furnaces, with six hot-air ovens, powerful blast-engine, five excellent boilers, with chimney stack, &c., complete, foundry, fitting, blacksmiths' and carpenters' shops, offices, storehouses, manager's house, stabling, and about fifty workmen's houses, all let and bringing in rental of upwards of £300 per annum.

There are also fire-brick works, clay mill, and five other steam-engines, with boilers, pumps, &c., working on various parts of the property, together with trams, weighing machines, and many miles of above and underground rail and tram-roads; also tools, plant, &c., all in use and in working order.

The Rhydffosddu, &c., estates are of great value as ironstone properties, the ore being rich in percentage of iron, and excellent in quality, while the ground is highly productive.

This property is, moreover, so situated that the whole of the ironstone veins crop out on the hills on the east side of the vale of Tawe in such a position that for many years they will be got by open working. When it shall become necessary to drive underground, the River Tawe being 500 or 600 ft. below the top of these hills will afford free drainage for an inexhaustible tract of minerals.

The main line of the Neath and Brecon Railway intersects the Onllwyn tract; and the Swansea Vale and Neath and Brecon Junction Railway runs through the Rhydffosddu and other properties. These railways have been promoted by the landowners in the district, and the development of these important mineral estates has been carefully kept in view in laying out the lines; the capital, consequently, which must otherwise have been expended in opening these tracts will be greatly lessened.

The Neath and Brecon Railway was opened through for goods and mineral traffic on Sept. 13, 1866. The Swansea Vale and Neath and Brecon Junction is being pushed on to the utmost, and it is anticipated that the whole system will be completed throughout during the present year.

Before the completion of these railways these estates had no means of communication other than a defective and expensive tramroad five miles in length, and supplies of limestone for fluxing purposes, &c., were only obtainable by similar means. By the completion of the Neath and Brecon line the cost of this important material will be reduced between 30 and 40 per cent.

The present owners of the property have agreed to accept £31,500 as the purchase-money, including the whole of the buildings, erections, houses, engines, machinery, and fixed and movable plant; payable one-third in cash, one-third in shares of the company, with one-half (that is, £5 each paid-up) and one-third in debentures of the company, having three years to run, and bearing interest at £5 per cent. per annum. It is anticipated there will be no difficulty in renewing these, if desirable.

It is proposed to call upon the shares issued to the public, at such intervals as may be requisite, £5 per share, thus making them paid-up to an equal amount with the shares taken by the vendors in part payment of purchase-money as above.

The present furnaces are equal to a weekly make of 140 tons of pig-iron, and it is proposed to lay out £6000 in extending the colliery openings sufficiently to supply 200 tons of coal per day for sale, the extraction having hitherto been confined to the purposes of the ironworks.

The cost and production will then stand thus:—

	COST.		
Purchase-money in cash and shares, exclusive of debentures, for which see below	£21,000	0	0
Amount required for extension of collieries	6,000	0	0
Working capital	3,000	0	0
Amount of share capital to be called up at £5 per share	£30,000	0	0
Amount of debentures, interest on which at 5 per cent. is deducted from profits, as below, £10,500.			
PRODUCTION.			
140 tons pig-iron weekly, say 7000 per annum, at 7s. 6d. per ton profit	£2625	0	0
200 tons coal per day, say 300 days per annum, at 2s. per ton profit..	6000	0	0
Total	£8625	0	0
Less interest at 5 per cent. on £10,500 debentures, as above	525	0	0
Yearly profits	£8100	0	0

Thus showing a profit of upwards of 25 per cent. per annum, without taking into account the income from rents and other sources.

These calculations have been carefully considered and verified by practical ironmasters and mining engineers personally acquainted with the locality, and the directors are satisfied that the above estimate of profits is considerably understated.

No promotion money will be paid, nor any expenses incurred, except those which are strictly legal and necessary.

If no allotment be made, the deposit money will be returned in full.

Prospectuses and forms of application may be obtained of any of the directors, or of the bankers, solicitors, auditors, or brokers of the company; and abstracts of the leases, with plans and further particulars of the property, and copies of the Memorandum and Articles of Association may be seen on application to the Secretary, at the company's offices, No. 2, Mount-street, Swansea; or at the offices of Mr. J. R. COBB, Solicitor, Brecon; or of G. B. MURLY, Esq., Langport, Somersetshire.—Nov., 1866.

TO MINE, SLATE QUARRY, AND RAILWAY COMPANIES.—CAPT. C. WILLIAMS is NOW OPEN to UNDERTAKE ALL KINDS of CONTRACTS, such as DRIVING LEVELS, SINKING SHAFTS, CONSTRUCTING WATER COURSES, CANALS, TRAMWAYS, &c., and ERECTING ALL SORTS of MACHINERY for MINING and OTHER PURPOSES, having on hand at all times a first-class staff of miners and machinists, who will proceed to any part of the world upon the shortest notice.

N.B.—In all cases 30 per cent. will be left in hand until the work is completed.

Tyn-y-Wern, Tallesin, via Shrewsbury.

NOTICE OF REMOVAL.

MESSRS. TREDINNICK AND CO., DEALERS IN STOCKS AND SHARES.

MR. RICHARD TREDINNICK, MINING ENGINEER AND CONTRACTOR.

MR. THOMAS TREDINNICK, SCRIVENER.

OFFICES.—ST. MICHAEL'S HOUSE, CORNHILL, LONDON.

The business hitherto conducted at 78, Lombard-street is transferred to the above address.

Stocks, Shares in Banks, Railways, Canals, and Insurance Companies dealt in, and Money Advanced upon all sound Securities. Principals alone treated with.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the OLD WHEAL NEPTUNE MINING COMPANY (LIMITED).—TO BE SOLD, in One Lot, by direction of the Registrar of the said Court, BY PUBLIC AUCTION, at OLD WHEAL NEPTUNE MINE, in the parish of Perranuthnoe, near Marazion, Cornwall, on Tuesday, the 22d day of January instant, at Twelve o'clock at noon, all the INTEREST of the said COMPANY of and in the SETTS or GRANTS, by virtue of which the mining operations of the said company have for some time past been carried on, and the undermentioned MINING MACHINERY, MATERIALS, and OTHER EFFECTS, viz.:—

ONE 70 in. cylinder PUMPING ENGINE, 12 ft. stroke, equal beam.
TWO BOILERS 11 tons each, with fittings complete.
1 60 ft. shears, 1 balance-bob, 1 10 arm capstan, 2 working barrels, pumps of various sizes, matching pieces, plunger poles, sling chains on bugles for pumps, stuffing box and gland, bolts, flange rings, fan machine, new work for angle bob, 2 drop screws 10 ft. long, 2¼ in. diameter; 2 large beams and scales, smiths' tools, powder, account-house furniture, and various other articles and effects in general use in mines.

The mine, machinery, and materials may be inspected at any time prior to the sale, by application at the mine.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro.

Dated Registrar's Office, Truro, January 3, 1867.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NEW WENDRON CONSOLS MINING COMPANY.—TO BE SOLD, BY PUBLIC AUCTION, at and upon the NEW WENDRON CONSOLS MINE, situate in the parish of Wendron, in the county of Cornwall, under the direction of the Registrar of the said Court, on Tuesday, the 15th day of January inst., at Twelve o'clock at noon, subject to such conditions as shall be then and there produced, together or in lots, all the INTEREST of the said COMPANY of and in the DEMISE or GRANT by virtue of which the mining operations of the said company have been carried on, and the MINING MACHINERY, MATERIALS, and EFFECTS now at the said mine, including, amongst other things—

ONE STEAM ENGINE, 30 in., 10 ft. stroke in cylinder, with first piece of rod and woodwork. BOILER 10 tons.
Bobs, 2 6 ft. 12 in. and 16 ft. 9 in. door pieces, 7 9 ft. 13 in. and 2 9 ft. 9 in. pumps, 1 11 ft. 13 in. and 1 11 ft. 12 in. workings, shears and stays, with shieve; launders, pulley stands, 1 9 ft. 4 in., 2 9 ft. 10 in., and 1 9 ft. 12 in. windbores, horse whims, a quantity of old fire timber.

To view, apply to Mr. FRANCIS EVANS, at the mine.

JOSEPH ROBERTS, Solicitor, Truro.

Dated Registrar's Office, Truro, 2d January, 1867.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

In the Consolidated Causes of Tregaskis *v.* Raby, Read *v.* Same, Bray *v.* Same, Sanders and Another *v.* Same, Sanders *v.* Same.

TO BE SOLD, pursuant to the several Orders made in the above-mentioned Causes, and dated respectively the 16th day of August last, BY PUBLIC AUCTION, at SOUTH WHEAL LEISURE MINE, in the parish of Perranzabuloe, within the said Stannaries, on Thursday, the 24th day of January instant, at Eleven o'clock in the forenoon, the undermentioned MINING MACHINERY and MATERIALS, viz.:—

ONE 24 in. PUMPING ENGINE, with BOILER complete.
Capstan and shears, shaft tackle, 9 in. matching, 8 in. working barrel, 9 8 in. pumps, 9 9 in. ditto, 9 in. windbore, plunger pole, stuffing box and glands, working barrel, 9 in. doorpiece and door, pump rods, rod plates, whim and winze kibbles, 3 4 ft. shieves, yokes, chain ladder, staples and glands, rod bolts, chain, capstan socket, 5 6 in. pumps, 6 in. matching, ditto windbore, working and doorpiece to match, screw stocks and plates, useful iron, 4 8 in. pumps, 8 in. doorpiece, ditto sinking windbore, ditto working, 33 pulleys, vice and bench, anvil, 1 38 in. bellows, smiths' tools, clack seatings, saddles and bracket, castings, spanners and bevils, battens, lots of useful timber. Bath stone quoins, and sundry materials in general use in mines, and now being in and upon South Wheal Leisure Mine, in the parish of Perranzabuloe, within the said Stannaries.

For further particulars, apply to the person in charge thereof.

HODGE, HOCKIN, AND MARRACK, Solicitors, Truro.
JOSEPH ROBERTS, Solicitor, Truro.

Dated Registrar's Office, Truro, January 9th, 1867.

In Chancery.

IN the MATTER of the RHOS HALL IRON COMPANY (LIMITED), TIPTON, STAFFORDSHIRE.

The IMPORTANT FREEHOLD PROPERTY, known as the TIPTON IRONWORKS, together with the MINES and the VALUABLE FIXED PLANT and MACHINERY, in excellent working condition.

MESSRS. PRICE AND CLARK WILL SELL, at the Hen and Chickens Hotel, Birmingham, on the 24th day of January, 1867, at Twelve for One o'clock, in One Lot, pursuant to the order of the Court of Chancery made in the said matter, with the approbation of the Master of the Rolls,

The VALUABLE FREEHOLD PROPERTY, known as the TIPTON IRONWORKS, in the parish of TIPTON, in the county of STAFFORD, containing, by estimation, 5A. 2R. 5P., or thereabouts, and the MINES and MINERALS, containing 4A. 2R. 26P., or thereabouts, under part of the surface (except the surface clay under part of such land). Together with the FIXED PLANT and MACHINERY, in excellent working condition.

The works have a frontage of about 600 ft. to the Birmingham Canal, also a boat dock of 150 ft. in length, and in close proximity to two railway stations, and comprise HOOP and SLITTING MILLS, cutters' shop, smithy, foundry, spacious open buildings with slated roofs, stabling, offices, managers' residences, &c. There are TWO BLAST FURNACES, measuring respectively 51 feet and 49 feet in height; three hot-air stoves, TWENTY-THREE PUDDLERS' FURNACES, SIX MILL FURNACES, several lofty chimney-shafts, FIVE STEAM-ENGINES, TWELVE STEAM-BOILERS, a 16-inch train of two pairs of forge bar and billet rolls; a boiler-plate train, with two pairs of rolls; one pair of No. 2 forge, two trains of 10 and 8-inch hoop rolls, a pair of 12 and 13-inch hoop hard rolls, a pair of 16-inch hard rolls; a 16-inch bar-train for slitting-mill, with all the necessary gearing; powerful turning lathes, fittings of gasworks, FOUR HUNDRED DOUBLE YARDS of IRON RAILS, a large area of iron-floor plates, and numerous appliances adapted for the efficient conduct of the works.

The premises may be viewed, and particulars had gratis at the place of sale of Messrs. RUTTER and NEVE, solicitors, Wolverhampton; and in London of GEORGE SCOTT, Esq., the official liquidator, 2, Bond-court, Walbrook; of Messrs. HOLLINGS, SHARP, and ULLITHORNE, solicitors, Field-court, Gray's Inn; and at the offices of Messrs. PRICE and CLARK, 48, Chancery-lane.

ROBERT MARSHALL, Chief Clerk.
HOLLINGS, SHARP, AND ULLITHORNE, Gray's Inn, Agents for Rutter and Neve, Wolverhampton (Solicitors for Official Liquidator).

Dated this 19th day of December, 1866.

TO COLLIERY PROPRIETORS AND OTHERS.

MESSRS. J. AND T. HOLLAND have received instructions from the Gresley Wood and Swadlincote Colliery Company (Limited) to SELL, BY AUCTION, at the Granville Arms Hotel, Swadlincote, in the county of Derby, on Wednesday, Jan. 16, 1867, at One for Two o'clock precisely, either as a whole in One Lot, or in the following or such other lots as may be determined upon at the time of the sale.

LOT 1 will consist of all that VALUABLE ESTATE known as the GRESLEY WOOD COLLIERY, situate on the turnpike-road from Burton to Swadlincote, and within about four miles of Burton-upon-Trent, and about one mile from the Midland Railway, on the Leicester and Burton line. The estate comprises the valuable colliery, and 50 A. 3 R. 16 P. or thereabouts of freehold wood land, with five valuable seams of coal thereunder, with the important lease held by the company, and including the whole of the BUILDINGS, the costly MACHINERY, and fixed PLANT, together with the gas works adjoining, and also a brick-yard, with all necessary fixed plant, the whole having communication by a branch line with the Midland Railway, and thus having direct access to all parts of the kingdom. Should this lot not be sold, the estate will be sold in the following or other lots.

LOT 2.—6 A. 2 R. 30 P. of FREEHOLD LAND, together with the COLLIERY PLANT and MINERALS under the whole of the estate, including the BUILDINGS, MACHINERY, fixed PLANT, GAS WORKS, and the leasehold portion held by the company, and also the junction and branch railway communicating with the Midland line.

LOT 3.—44 A. 0 R. 26 P. of VALUABLE FREEHOLD WOODLAND, with the FIRE and OTHER CLAYS thereunder to a depth of 100 yards from the surface thereof, the whole having an extensive frontage to the turnpike-road leading from Burton to Swadlincote. Should this lot not be sold, the estate will then be sold in the following lots:—

LOT 4.—A VALEABLE PLOT of FREEHOLD BUILDING LAND, containing 2 A. 3 R. 22 P., with an excellent frontage to the road leading from Burton to Swadlincote, of 277 yards or thereabouts.

LOT 5.—A similar plot adjoining Lot 4, containing 3 A. 0 R. 30 P., with an excellent frontage to the before-mentioned turnpike-road of 267 yards or thereabouts.

LOT 6.—6 A. 2 R. 37 P. of VALUABLE FREEHOLD LAND, including half the road between Lots 6 and 7, with the BRICK-YARD, KILNS, and fixed PLANT thereon.

LOT 7.—7 A. 2 R. 29 P. of VALUABLE FREEHOLD LAND, including half the road between Lots 6 and 7.

LOT 8.—5 A. 1 R. 30 P. of VALUABLE FREEHOLD LAND, including half the road between Lots 8 and 9.

LOT 9.—8 A. 3 R. 14 P. of VALUABLE FREEHOLD LAND, including half the road between Lots 8 and 9

LOT 10.—2 A. 3 R. 14 P. of VALUABLE FREEHOLD LAND, including half the road between Lots 10 and 11.

LOT 11.—6 A. 2 R. 19 P. of VALUABLE FREEHOLD LAND, including half the road between Lots 10 and 11.

The minerals under Lots 4, 5, 6, 7, 8, 9, 10, and 11 are reserved, but the whole of these lots will be sold, to include the fire and other clay thereunder to the depth of 100 yards from the surface thereof.

The timber and poles to be taken at a valuation, in the usual way.

Full particulars, with plans of the estate, will be ready on the 1st proximo, and may be obtained of the Auctioneers, Leicester; Messrs. STONE, PAGET, and BILLSON, solicitors, Leicester; Messrs. SHENTON and BAKER, architects; or Messrs. MACKENZIE, TREHERNE, and TRINDER, 77, Gresham House, Old Broad-street, London, E.C.

TO BE SOLD, cheap, a PORTABLE ENGINE of 14 horse power, double cylinder, of first-class construction, workmanship, and material. Winding gear to order. SECOND-HAND PORTABLES FOR SALE.—Apply to Messrs. BARROWS and CARMICHAEL, engineers, Banbury, Oxon.

IMPORTANT SALE.

GELLIA-CADOXTON COLLIERY.

MR. THOMAS THOMAS WILL SELL, BY AUCTION, at the Castle Hotel, Neath, on Tuesday, January 15, 1867, at Four o'clock in the afternoon, subject to conditions of sale to be then produced, all that desirable LEASEHOLD COLLIERY, known as the GELLIA-CADOXTON COLLIERY, situate near the town of NEATH, in the county of GLAMORGAN, comprising the MINES and MINERALS held under the several leases granted to the Dynevor Coal Company by John Dillwyn Llewelyn, Esq., Mr. John Jenkin and another, William Griffiths Jones, Esq., and the Primrose Coal Company, containing in the whole about 638 acres, as below—

J. D. Llewelyn, Esq... 419 acres, £400 per annum, and royalties.
Messrs. Jenkins ..... 26 acres, £ 50 per annum, and royalties.
W. G. Jones, Esq. .... 161 acres, £164 per annum, and royalties.
Primrose Coal Co. .... 32 acres, £ 32 per annum, and royalties.

Together with the ENGINES, PLANT, and MACHINERY belonging thereto.

Further particulars of the several terms, royalties, &c., may be obtained on application to Messrs. NEWMAN, LYON, and NEWMAN, Solicitors, 7, King's Bench Walk, Temple, London, and Yeovil, Somerset; JAMES KEMPTHORNE, Esq., Solicitor, Neath; or to the Auctioneer, at his offices at Neath and Swansea.

GLAMORGANSHIRE.—VALUABLE MINES AND MINERALS.

MR. THOMAS THOMAS WILL SELL, BY AUCTION, at the Castle Hotel, Neath, on Friday, February 1, 1867, at Four o'clock in the afternoon, subject to conditions of sale to be then produced, all those desirable leasehold MINES and MINERALS, under a part of the GLANBRANE ESTATE, situate in the parish of LLANSAMLET, containing about 212 acres, held under a lease granted by the Neath Abbey Coal Company, at a rent of £400 per annum and royalties.

Further particulars may be obtained on application to Messrs. NEWMAN, LYON, and NEWMAN, Solicitors, 7, King's Bench Walk, Temple, London, and Yeovil, Somerset; JAMES KEMPTHORNE, Esq., Solicitor, Neath; or to the Auctioneer, at his offices at Neath and Swansea.

IMPORTANT IRONWORKS IN MONMOUTHSHIRE FOR SALE.

THE CWMCELYN, BLAINA, AND COALBROOK VALE IRONWORKS, BRAND C◇C, TO BE SOLD, BY AUCTION,

at the Auction Mart, London, at the end of February, 1867, at One o'clock, unless previously sold by private contract.

These Works comprise ONE THOUSAND ACRES of MINERAL PROPERTY of which 440 are freehold, BLAST FURNACES, FORGES, and MILLS; FOUNDRIES, ENGINEERING SHOPS, and TIMBER SAW MILLS; all connected by a complete system of railways; together with LOCOMOTIVE ENGINES, extensive ROLLING STOCK, and every other requisite for carrying on the manufacture of iron. The forges and mills have averaged for six years a make of 39,000 tons of finished iron.

There is a population of 7000 to 8000 attached to the works, with ample cottage accommodation, including about 1000 houses belonging to the property.

The minerals are well opened and drained, and in quality and quantity equal to any in the district; the coal for steam purposes is unsurpassed.

The brand, or make, of the iron is well known in Great Britain, on the Continent, the United States, and the Colonies.

The works are distant twenty miles from Newport, and are intersected by the Monmouthshire Railway, affording a direct transit to the shipping port, and also to the inland markets.

The property is well worthy the attention of capitalists, who are invited to treat for the purchase by private contract.

The property may be viewed, and particulars with every information obtained by application to Mr. F. LEVICK, Blaina Ironworks, near Newport, Monmouthshire; Messrs. QUILTER, BALL, and Co., 3, Moorgate-street, London; and Messrs. SECRETAN, WOODHOUSE, and COLBORNE, Newport, Monmouthshire.

FOR SALE, BY TENDER, BILLIN CONSOLS AND REETH CONSOLIDATED MINES SETTS and MATERIALS, situated in the parishes of Towednack and Uny Lelant, in the county of Cornwall, consisting of—

ONE 36 in. PUMPING ENGINE, with 10 ton BOILER, nearly new.
ONE 22 in. WINDING ENGINE, with 8 ton BOILER, nearly new.
ONE 27 in. STAMPING ENGINE, with 8 ton BOILER, lifting 36 heads.

About 300 fms. pitwork, 11 to 5 in., and all the necessary materials for working the mine.

The lodes are parallel to and adjoining Wheal Reeth, and afford a rare opportunity to capitalists.

Sealed tenders, marked "Tenders for Reeth Consols Mine," should be addressed to Mr. JAMES B. COULSON, Penzance, on or before Saturday, the 16th February next, soon after which the purchaser will have notice thereof.

For particulars, apply to Capt. R. BLIGHT, at the mine.

Dated Penzance, January 9, 1867.

IRON, MANGANESE, AND COPPER.

FOR SALE, at Glandore, county Cork, a MINING SETT SEVEN HUNDRED ACRES in extent, containing LODES of MANGANESE, and RED HEMATITE IRON in abundance, from 20 to 30 fms. broad extending in length through the sett about one mile, and for miles into other setts. Also, TWO COPPER LODES, of the richest variety, one each side of the iron and manganese.

The mine has been worked for manganese, and several thousands of tons shipped. It is drained from water to the depth of 15 fms., and can be drained from 25 to 30 fms. by an adit level. The iron can be raised for 2s. 6d. per ton, and shipped for 6d. per ton. Royalty on manganese, 1s. per ton; ditto on iron 4d. per ton; ditto on copper, 1-16th. Lease of 21 years. Purchase money to be £1500.

I can highly recommend a sett near Goleen, county Cork, BALLYRISODE ESTATE, FIVE HUNDRED AND NINETY ONE ACRES, from TEN to TWELVE COPPER LODES running parallel, and two cross-courses. I have not seen so much surface mineral indications on any estate in the county of Cork. The backs of the lodes can be traced through the length of the estate showing copper—grey, purple, and yellow,—and some of the lodes throwing up a green carbonate of copper, from the black oxide of copper One lode carries a good flookan; this lode contains yellow and purple copper, and some malleable copper. I consider that as there is so much surface indication good deposits will be found in shallow depths. Captain WILLIAM TONKIN.

Dhurode Mine, near Goleen, Skibbereen, Cork, Ireland.

DEAN FOREST, GLOUCESTERSHIRE.

VALUABLE COAL FIELD.—TO BE SOLD, OR LET all the FREEHOLD INTEREST in a rich COAL FIELD of 335 Acres lying in the deep of and adjoining two coal fields, which have been profitably worked for many years, but are now nearly exhausted. Fire-damp is unknown in the Dean Forest Collieries, and the principal vein lies generally under a rock top. The property is linked by direct communication with the Port of Gloucester.—For further particulars, apply to Messrs. DEBENHAM, TEWSON, and FARMER, Land Agents, 80, Cheapside, London.

SUITABLE FOR A HARDWARE MANUFACTORY.

TO BE LET, for a term of 99 years, a most VALUABLE and ELIGIBLE SITE of from FIVE to FIFTEEN ACRES, with a never failing stream of water passing through. Large collieries are in the immediate neighbourhood, tin and wire works within a mile, and extensive ironworks are carried on in the same valley. There is a first-class station within 200 yards, at which 20 passenger trains stop daily; the property is on a level with the line, and a siding may be constructed with great facility.

The Great Western and the London and North-Western trains work the lions of the district and the traffic of the station referred to, and the sharp competition of these great railway companies has tended to reduce the rates to the lowest possible charges.

For further particulars, apply to Messrs. DEBENHAM, TEWSON, and FARMER, Auction, Land, and Estate Agency Offices, 80, Cheapside, London, E.C.

TO CAPITALISTS, PUBLIC COMPANIES, AND OTHERS.—Particulars of a VALUABLE and EXTENSIVE SLATE AND COPPER PROPERTY FOR IMMEDIATE DISPOSAL BY PRIVATE CONTRACT situate in NORTH WALES, within about four miles of shipping port, to which place a railway, running for nearly two miles parallel to and within a few hundred yards of the estate, will enable the produce to be conveyed at an almost nominal cost. There are upon the property four or five very EXTENSIVE SLATE VEINS and a VALUABLE COPPER MINE.

Three quarries have been opened, and the works in either case brought nearly to completion, several cargoes of excellent slates having been sold, as also a large quantity of very rich copper ore. There are about 800 yards of levels, 100 yards of shafts, about one mile of iron rails laid down, foreman's house, magazine, &c.

The lease is for a term of NINETY-NINE YEARS, WITHOUT ANY RENT OR ROYALTY WHATEVER. These unusually favourable terms very much enhance the value of the property. There are reports and opinions of seven or eight of the most eminent authorities as well as other opinions as to the capabilities and nature of the property. In addition to the three quarries alluded to another vein of slate has been opened upon and tested. The property offers unusual facilities for sub-letting in four or five divisions, exclusive of the copper, the quarries being far apart, and the existing works as advanced in either case either division being sufficiently large for one company or firm.

The property possesses great natural advantages. Many thousands of pounds have been expended on the works, which have been carried out in a thorough substantial manner, the heavy expenditure of capital and inevitable loss of time attending the opening of all quarries having been already incurred. The terms of purchase will be made easy; one-third will be required in cash, half of which must be paid at once, and half at a date to be decided upon. Two-thirds of the whole purchase money may remain on mortgage of the lease for four or five years if desired.

Application in first instance to be made to "M. S. A.," Deacon's Library, Leadenhall-street, London.

TO CAPTAINS OF MINES, ENGINEERS, AND SURVEYORS AND ALL WHO DRAW PLANS.

STENCIL PLATES of a new description, for LETTERING PLANS.

Messrs. BERKELEY beg to state that they have invented a new description of STENCIL PLATES, for expediting the Lettering on Plans.

The above will enable any person to produce the most accurate impressions, equalling the finest hand-work. They prevent the ink from spreading or blotting under the plate, and are far superior to anything of the kind that has ever been in use, and are supplied at less than one-half the usual cost. One hundred and fifty testimonials, with specimens, &c., forwarded to all parts of the world on application to—

BERKELEY AND CO.,
28, CHURCH STREET, KENTISH TOWN, LONDON.

The new description of Stencil Plates for Lettering Plans can be had in all languages.

The new description of Stencil Plates for Lettering Plans will enable any person to accomplish the work of a day in one minute.

IMPORTANT REDUCTION IN THE PRICES OF PORTABLE ENGINES FOR 1866.

CLAYTON, SHUTTLEWORTH, AND CO
ENGINEERS,
MANUFACTURERS OF PORTABLE and FIXED STEAM ENGINES, MACHINERY for PUMPING, HOISTING, GRINDING, SAWING, &c.
ENGINES for STEAM CULTIVATION, SELF MOVING ENGINES for COMMON ROADS, and AGRICULTURAL PURPOSES GENERALLY.
STAMP END WORKS, LINCOLN, and 78, LOMBARD STREET, LONDON.
ALSO AT
LOWENGASSE No. 44, LANDSTRASSE, VIENNA, and GEGENUBER DEM BAHNHOF, PESTH.

Descriptive, illustrated, and priced catalogues free per post.
Special Drawings when required.
THE BEST STEAM THRASHING MACHINERY MADE. 123

SANDYS, VIVIAN, AND CO.,
COPPER HOUSE FOUNDRY, HAYLE, CORNWALL,
ENGINEERS, IRON AND BRASS FOUNDERS,
MANUFACTURERS of PUMPING ENGINES for WATER-WORKS, MINING MACHINERY, MATERIALS, and TOOLS of every description.
Foreign mines supplied on the best terms, and at the shortest notice. Second-hand Mining Machinery and Pitwork in Stock; also a new 4 and a 2-horse power high-pressure vertical engines, with boilers, and a second-hand 14-inch whim engine, condensing. 124

WILLIAMS'S PERRAN FOUNDRY COMPANY,
PERRANARWORTHAL, CORNWALL.
MANUFACTURERS of STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.
London Agent.—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C. 125

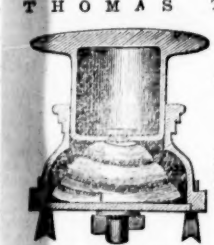
STEAM-BOILERS made by WILLIAM WILSON, LILYBANK BOILER WORKS, GLASGOW, on the most improved principles, for home and export. All boilers made of the best material and workmanship, proved and warranted tight under a high pressure, and delivered at any railway station or shipping port in the kingdom at moderate rates. Lithograph of boilers forwarded post-free on application. 126

ANALYSES OF COAL, CANNEL, MINERAL OILS, and all OIL PRODUCING MINERALS are UNDERTAKEN by
A. NORMAN TATE, F.A.S.L., &c.,
ANALYTICAL and CONSULTING CHEMIST, and CHEMICAL ENGINEER
(Author of "Petroleum and Its Products," &c.),
MOLD, NORTH WALES.
Plans and estimates for oil and chemical works prepared, and their erection superintended.
Assays of metals and their ores carefully conducted. 127

BICKFORD'S PATENT SAFETY-FUSE OBTAINED the PRIZE MEDALS at the ROYAL EXHIBITION of 1851, at the INTERNATIONAL EXHIBITION of 1862, in London, and at the IMPERIAL EXPOSITION held in Paris, in 1865.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—
EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK. 128

THOMAS TURTON AND SONS,
MANUFACTURERS OF



CAST STEEL for PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL	FILES MARKED
BLISTER STEEL,	T. TURTON,
SPRING STEEL,	EDGE TOOLS MARKED
GERMAN STEEL,	WM. GREAVES & SON.

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.
SHEAF WORKS AND SPRING WORKS, SHEFFIELD.
LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.,
Where the largest stock of steel, files, tools, &c., may be selected from.

Gun-Cotton—By Royal Letters Patent.

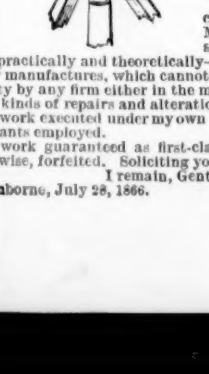
PRENTICE'S BLASTING GUN-COTTON PRODUCES NO SMOKE, and having been further REDUCED in PRICE is now by far the CHEAPEST as well as the SAFEST material which can be used in any description of mining or quarrying work.
Sample cases, together with every information, may be obtained from—
THOMAS PRENTICE AND CO.,
173, FENCHURCH STREET, LONDON, E.C.
AGENT—Mr. Thorne. 130

GUN-COTTON has been constantly used with great success in the tunnel of the Aberdeen Water-Works, lately opened by Her Most Gracious Majesty the Queen. 131

NITRO-GLYCERINE, OR NOBEL'S PATENT BLASTING OIL.—The EXPLOSIVE FORCE of this BLASTING OIL is TEN TIMES that of GUNPOWDER, and the ECONOMY and SAVING in TIME, LABOUR, and COST in removing granite and hard rock, in sinking shafts, driving tunnels, and opening forward in close ends is immense.
It will not explode from a spark or fire, but from concussion alone, and is consequently much less dangerous than gunpowder or gun-cotton.
Being heavier than water it sinks to the bottom of a wet hole, no other tamping than water being required.
One charge of this blasting oil, which is now being used with wonderful effect in all the largest slate quarries in North Wales, will displace as much slate rock as four or five charges of gunpowder; and its great force, acting on a large quantity of good slate rock, shakes and displaces it at the natural joints, or cracks, without damaging the slabs nearly so much as the more numerous blasts from any other blasting material would do.
This invaluable quarrying agent may now be obtained from Messrs. WEBB and Co., Carnarvon, sole consignees from the patentee. 132

COAL CUTTING MACHINERY.—The WEST ARDSLEY COMPANY having, by recently patented improvements, perfected their coal cutting machinery, worked by compressed air, are NOW READY to MAKE CONTRACTS for the CONSTRUCTION and USE of their MACHINES.
The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.
All communications to be made to Messrs. FIRTH, DONNISTHORPE, and BOWER, 8, Britannia-street, Leeds.

NOTICE.—The WEST ARDSLEY COMPANY, having reason to believe that their patents are being infringed upon, hereby give notice that they will TAKE LEGAL PROCEEDINGS AGAINST ALL PARTIES who may MAKE FOR SALE, or USE ANY MACHINERY in the construction of which any such INFRINGEMENT is MADE. 133



A. JEFFERY,
MATHEMATICAL INSTRUMENT MAKER,
CAMBORNE, CORNWALL.

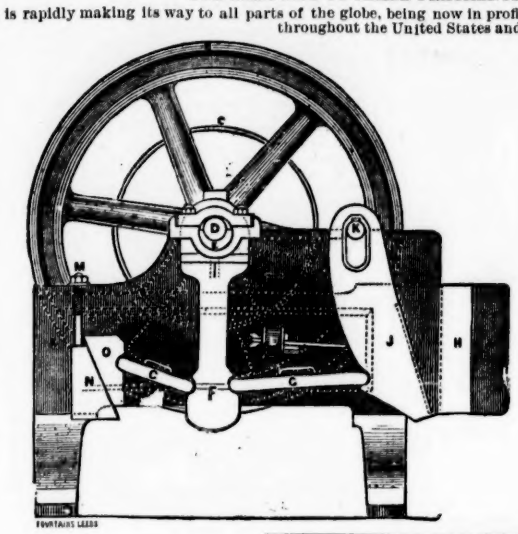
TO MINE MANAGERS, AGENTS, AND SURVEYORS.

GENTLEMEN,—I most respectfully beg to inform you that my Manufactory for Mine Surveying and Drawing Instruments is now in full operation, and THEODOLITES, DIALS, LEVELS, MEASURING CHAINS, ENGINE COUNTERS, ASSAY SCALES and WEIGHTS, PROTRACTORS, CASES of DRAWING INSTRUMENTS, and all kinds of SURVEYING and MAPPING INSTRUMENTS are kept in stock or made to order on the shortest notice.
Having been confined for several years exclusively to the manufacture of first-class Mine Surveying Instruments—which profession I trust I have to some degree mastered both practically and theoretically—I confidently venture to solicit an inspection of my manufactures, which cannot be surpassed for accuracy and general good quality by any firm either in the metropolis or the provinces.
All kinds of repairs and alterations made to instruments.
All work executed under my own direct supervision, and none but experienced assistants employed.
All work guaranteed as first-class for quality and accuracy, and, if found otherwise, forfeited. Soliciting your kind favours,
I remain, Gentlemen, yours obediently,
Camborne, July 28, 1866. A. JEFFERY. 134

IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,
OR ORE CRUSHING MACHINE,
FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw, about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. —— THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON,
Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

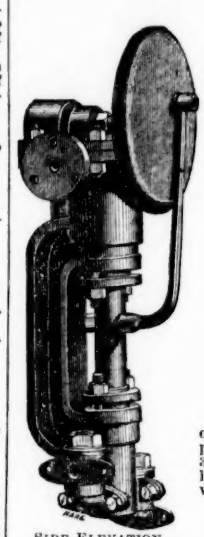
General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,
MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM. 140

GIFFARD'S PATENT INJECTOR COMPLETELY SUPERSEDED BY

THE NEW PATENT DONKEY STEAM PUMP



SIDE ELEVATION.

[SPECIFICATION.]

This Pump is constructed on an entirely novel and simple principle, there being only a crank-shaft and fly-wheel of small size, the slide-valve being worked inside the steam chest by means of a steel crank and friction roller, thus dispensing with eccentric, rod, and straps. All the working parts are made of steel, hardened and polished. The cylinder and pump are in one casting, and bored throughout the body of the pump as well as the stuffing-box. The pump-ram is of the best gun-metal, being cast in one piece with the piston and piston-rod, and fitted accurately to the bored body of the pump, thus ensuring a nearly perfect vacuum in pumping. The stuffing-box glands are also of gun-metal polished. The valves and boxes are of the best gun-metal, the valves being of the spherical description, the covers fitted with brass cages, and the joints faced metal to metal. The slide-valve is of hard bell-metal. The steam-chest, with cylinder end, is in one piece, and may be removed without disturbing either steam or exhaust pipes. The whole engine may be taken to pieces and put together under steam in fifteen minutes, without disturbing any pipes whatever.

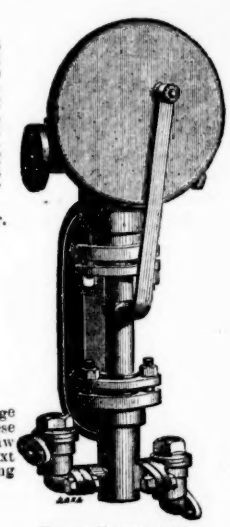
Size.	Ram. in.	Stroke. in.	Approx. h.p. boiler supplied.	Approx. gal. thrown p. hour.	Price.	Price of Giffard's Injector. In brass.	In iron.
No. 4	1¼	3	15	230	£10 10	£15	£10 10
5	1⅞	3	22	350	12 12	19	13 10
6	1⅞	4	30	500	14 14	23	16 10
7	2¼	4	40	700	17 0	27	19 10
8	2¼	5¼	55	900	19 10	32	22 10
9	2½	5½	75	1150	22 10	36	25 10
10	2½	6¾	90	1420	25 10	40	28 10
11	2¾	6¾	110	1720	28 10	45	31 10
12	2¾	8	120	2000	31 10	50	34 10

N.B.—Sizes and capacities similar to Giffard's Injector. All guaranteed to work efficiently.

Terms: Nett Cash on Delivery in London.

Giffard's injector will not force water over 120° Fahr., while these pumps possess the great advantage of being able to pump boiling water. Giffard's injector will not draw water over 6 ft. deep, while these pumps draw water 15 ft., and by using one size larger than required for forcing the quantity will draw 30 ft. deep. These pumps begin to work at 15 lbs. per square inch; to work at a lower pressure the next larger size must be used. Sizes up to No. 10 kept in stock. Larger sizes, and special pumps for throwing water into tanks, or as fire-engines, can be made in a few days on application to the undersigned.

BROWN, WILSON, AND CO.,
80, CANNON STREET, E.C.; AND VAUXHALL IRONWORKS, S.



FRONT ELEVATION. 141

BRITISH, COLONIAL, AND FOREIGN PATENTS, REGISTRATION OF DESIGNS, COPYRIGHTS, TECHNICAL TRANSLATIONS, DRAWINGS, &c.
MR. MICHAEL HENRY,
Memb. Soc. Arts, Assoc. Soc. Engineers, Author of the "Inventors' Almanac," and the "Defence of the Present Patent Law."
PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.
Inventors advised in relation to Patents and Inventive and Industrial Matters. Printed information sent free by post. Specifications drawn and revised. Searches conducted. Abstracts, Cases, and Opinions drawn.
Translations of Catalogues, Trade Notices, and Circulars for the approaching Paris Exhibition. Mr. HENRY has had especial experience in technical French, and in French Manufacturing and Commercial Matters.
Offices, 68, Fleet-street, E.C., London, corner of and entrance in Whitefriars-street. 135

CREASE'S NEW AND IMPROVED PATENT BORING MACHINE.—In consequence of the various and IMPORTANT IMPROVEMENTS that an experience of several years has enabled the inventor to introduce into these machines, he can with the most perfect confidence recommend them for their increased DURABILITY, SIMPLICITY, ECONOMY, and SPEED to be attained by their adoption in DRIVING LEVELS or DRIFTS.
The inventor has made arrangements to supply them in any quantity, with warrantry. Orders executed according to their date of priority.
Address, EDWARD S. CREASE, Tavistock, Devon. 136

BASTIER'S CHAIN PUMP.—This patent pump is the MOST EFFICIENT in existence for LIFTING ANY QUANTITY of WATER from ANY DEPTH. One lifting from a depth of 170 ft. may be seen at work daily, on application to the
SOLE LICENSEES,
MESSRS. J. JACKSON AND CO., ENGINEERS, 17, GRACECHURCH STREET, LONDON, E.C.,
Who SUPPLY PUMPS and LICENCES.
Communications to Mr. Bastier, the patentee, to be sent to the same address.
AGENT FOR THE COUNTIES OF NORTHUMBERLAND AND DURHAM, YORKSHIRE, DERBYSHIRE, AND NORTH STAFFORDSHIRE,
MR. THOMAS GREENER, MINING OFFICE, NORTHGATE, DARLINGTON.
AGENTS FOR SCOTLAND.
MESSRS. P. and W. MACLELLAN, 127 and 129, IRONGATE, GLASGOW. 137

RAILWAYS AND MINES.—Capitalists who seek safe and profitable investments, free from risk, should act only upon the soundest information. The market prices for the day are for the most part governed by the immediate supply and demand, and the operations of speculators, without reference to the *bona fide* merits of the property. Railways depend upon the traffic, expenditure, and capital accounts, the probabilities of alliance or competition with neighbouring companies, the creation of new shares, the state of the Money Market as affecting the renewal of debentures, and other considerations founded on data to which those only can have access who give special attention to the subject. Mines afford a wider range of profit than any other public securities. The best are free from debt, have large reserves, and pay dividends bi-monthly varying from £10 to £15 per cent. per annum. Instances frequently occur of young mines rising in value 400 or 500 per cent. But this class of security, more than any other, should be purchased only upon the most reliable information. The undersigned devote special attention to Railways and Mines, afford every information to capitalists, and effect purchases and sales upon the best possible terms. Thirty years' experience in mining pursuits justifies us in offering our advice to the uninitiated in selecting mines for investment.
MESSRS. TREDINNICK AND CO.,
ST. MICHAEL'S HOUSE, CORNHILL, LONDON. 138

FINANCE, RAILWAYS, AND MINING IN THE UNITED STATES.—Persons in the United Kingdom and the colonies interested in the above should order THE STOCKHOLDER: MONITOR OF FINANCE AND INDUSTRY, MINING AND RAILWAY RECORD. Published every Tuesday morning, at No. 72, William-street, New York, U.S.A., 16 pages 4to, at $6 per annum for European subscriptions, postage prepaid; six months, $3. Accurate quotations of all important Bonds and Stock Securities in the United States; Government, State, City, Bank, Insurance, Petroleum, Mining, and other miscellaneous Joint-Stock Organisations, with the Financial Statements of the same; Notices of Payment of Interest and Dividends; with numerous papers on United States Finances, and the Railway and mining interests of that country. Inventors and parties dealing in railway materials and supplies, or mining machinery, will find this journal an excellent medium for advertising in the United States their manufactures and inventions. Subscriptions and advertisements received at the office of the London MINING JOURNAL, 26, Fleet-street, E.C., and by Mr. F. ALGAR, agent, 11, Clement's-lane, Lombard-street, London, E.C. 139

THE PRACTICAL MECHANIC'S JOURNAL for JANUARY, price 1s., with plate engraving of Passenger Engine "Pluto," by the Avonside Engine Company, and fifty-two wood engravings. Original articles on Some Points of Practice in Iron Founding; Todd's Vertical Rolls; Self-acting Oiling Apparatus for Engine Cylinders; on the Flow through Apertures of Solid Bodies; the Dry Dredger; Paris Exhibition, 1867; Implements at the Smithfield Show; Smith's Railway Wheels.—Recent Patents: Vehicles for Common Roads—Puckering; Feed Apparatus for Scribbling and Carding Engines—Wailes and Cooper; Elevating and Forcing Water—Bernard. Reviews of Books, Mechanic's Library, Correspondence, Scientific Societies, Marine Memoranda, Monthly Notes, List of Patents, &c.—London: Longmans, Paternoster Row; Editors' Offices (Offices for Patents), 47, Lincoln's Inn-fields. 142

LETTS'S DIARIES, 1867, are PUBLISHED in over ONE HUNDRED DIFFERENT FORMS, at prices ranging from 6d. to £6 each. All booksellers keep them, and will supply catalogues gratis. 143

Just published, price 6d.,
THE COST-BOOK SYSTEM: Its Principles Practically Considered. Embracing Suggestions for the Formation of a Cost-book Mining Company.
By THOMAS TAPPING, Esq. (of the Middle Temple, Barrister-at-law), Author of a Prize Essay on the same subject, and of many other works on Mining Law.
London: MINING JOURNAL Office, 26, Fleet-street, E.C. 144

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764.)
Published every Saturday, price 2d., or quarterly 2s. 2d.
THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.
Published every morning, price 1d.
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland. 145

CHARLES RYLAND AND SONS' WEEKLY REPORT ON THE IRON TRADE.—The "WEEKLY REPORT ON THE IRON TRADE" is a reliable authority on all matters connected with the various trades of the Iron and Mining Districts of North and South Staffordshire, Cleveland District, North and South Wales, and Scotland. The list of subscribers comprises the names of the leading firms in the great centres of industry above referred to. It contains complete, authentic, and unbiassed information relative to the various branches of the metallic trades in all parts of the country.
Arrangements have been made for illustrating advertisements with block engravings, &c. Subscriptions, payable in advance:—One year, post free, £2 2s.; half-year, post free, £1 1s.; quarter-year, post free, 10s. 6d. Remittances may be made in postage stamps. Advertisements and orders to be addressed—"Charles Ryland and Sons, The Mount, Handsworth, Birmingham." 146

THE STOCKTON AND HARTLEPOOL MERCURY AND MIDDLESBOROUGH NEWS (published at Hartlepool) is eminently the organ of the Coal, Iron, and Iron Shipbuilding Trades in the extensive Mining and Maritime District of South Durham and Cleveland, with which it has been closely identified since its origin. The "Mercury" was for years the only newspaper published in South Durham and Cleveland, and is yet the only one published more than once a week. Advertisements to be forwarded to the publisher, Mr. JOHN H. BELL, Southgate, Hartlepool. 147

NERVOUS DEBILITY: ITS CAUSE AND CURE.—Before seeking aid from the so-called remedies without medicine, read this valuable work on the Treatment and Cure of Nervous and Physical Debility, Loss of Appetite, Pains in the Back, Spermatorrhœa, &c., with Plain Directions for Perfect Restoration to Health. Sent post free to any address, on receipt of two postage stamps. Letters of enquiry or details of case promptly answered.
Address, Dr. SMITH, 8, Burton-crescent, London, W.C. 148

DR. WATSON (of the Lock Hospital), F.R.A.S., Member of the College of Physicians and Surgeons, on the SELF-CURE of NERVOUS and PHYSICAL DEBILITY, Lowness of Spirits, Loss of Appetite, Timidity, Incapacity for Exertion, &c., with means for perfect restoration. Sent free for two stamps by Dr. WATSON, No. 1, South-crescent, Bedford-square, London. Consultations daily from 11 till 3, and 6 till 8; Sundays, 10 till 1. 149

Just published, post free for two stamps,
WONDERFUL MEDICAL DISCOVERY, demonstrating the true causes of Nervous, Mental, and Physical Debility, Lowness of Spirits, Indigestion, Want of Energy, Premature Decline, with plain directions for perfect restoration to health and vigour, WITHOUT MEDICINE. Sent free on receipt of two stamps, by W. HILL, Esq., M.A., Berkeley House, South-crescent, Russell-square, London, W.C. 150

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, *c*, Cheshire*	10	—		8 7 8	0 10 0	Aug. 1866
200	Botallack, *t, c*, St. Just	91	—		488 15 0	5 0 0	May, 1866
10000	British Slate Company	9	—		9 per cent.		Sept. 1866
4000	Brookwood, *l*	1	—		0 5 0	0 2 6	Sept. 1866
1000	Bronfloyd, *l*, Cardigan*	12	—		8 7 0	6 0 0	Aug. 1866
6400	Cashwell, *l*, Cumberland*	2	10	1⅛	0 1 6	0 1 6	Aug. 1866
916	Cargoll, *s-l*, Newlyn	15	5 7	—	13 15 0	1 0 0	Feb. 1866
867	Cwm Erfin, *l*, Cardiganshire*	7	10	—	21 18 0	1 0 0	Jan. 1867
128	Cwmystwith, *l*, Cardiganshire	60	0	—	372 10 0	5 0 0	Dec. 1866
280	Derwent Mines, *s-l*, Durham	300	0	—	167 0 0	5 0 0	Oct. 1866
1024	Devon Gt. Consols, *c*, Tavistock†	1	0	410	1042 0 0	6 0 0	Nov. 1866
358	Dolcoath, *c, t*, Camborne	128	17 6	—	818 10 0	2 0 0	Dec. 1866
6144	East Caradon, *c*, St. Cleer†	2	14 6	6½	14 5 6	0 2 6	July, 1866
300	East Darren, *l*, Cardiganshire	32	0	—	136 10 0	2 0 0	Nov. 1866
128	East Pool, *t, c*, Pool, Illogan	24	5 0	—	387 10 0	2 10 0	Nov. 1866
5000	East Rosewarne, *c, t*, Gwinear	2	15 0	—	0 10 6	0 1 6	Jan. 1866
1906	East Wheal Lovell, *t*, Wendron	3	9 0	9½	2 7 6	0 7 6	May, 1866
2800	Foxdale, *l*, Isle of Man*	25	0	—	69 10 0	0 10 0	Jan. 1867
5000	Frank Mills, *l*, Christow	3	18 6	—	3 5 6	0 5 0	Feb. 1866
15000	Great Laxey, *l*, Isle of Man*	4	0 0	18	5 15 0	0 10 0	Dec. 1866
5908	Great Wheal Vor, *t, c*, Helston†	40	0 0	18½	10 17 6	0 7 6	Dec. 1866
1024	Herodsfoot, *l*, near Liskeard†	8	10	32	39 0 0	1 10 0	Oct. 1866
6000	Hingston Down, *c* †	5	10	—	0 10 0	0 5 0	April, 1866
400	Lisburne, *l*, Cardiganshire, Wales	18	15 0	—	483 10 0	3 0 0	Nov. 1866
9000	Marke Valley, *c*, Caradon	4	10 6	4½	3 9 0	0 2 0	Oct. 1866
3000	Minera Boundary, *l*, Wrexham*	1	0 0	—	0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co. *l*, Wrexham*	25	0 0	—	205 8 0	3 0 0	Nov. 1866
20000	Mining Co. of Ireland, *c, l, cl*	7	0 0	19½	—	0 7 9	July, 1866
40000	Mwyndy Iron Ore*†	3	5 0	—	0 6 6	0 2 6	Mar. 1866
—	New Merrybent and Middleton*	3	10 0	—	5 per cent.		Nov. 1866
600	Pant-y-Glien, *sl.**	20	0 0	—	10 per cent.		May, 1866
200	Parys Mines, *c*, Anglesey*	50	0 0	—	157 10 0	5 0 0	Jan. 1866
1120	Providence, *t*, Uny Lelant†	10	6 7	30	81 17 6	0 10 0	Nov. 1866
512	South Caradon, *c*, St. Cleer†	1	5 0	330	539 10 0	5 0 0	Nov. 1866
6000	South Darren, *l* *	3	6 6	1¾	0 5 6	0 2 6	June, 1866
6000	Tincroft, *c, t*, Pool, Illogan†	9	0 0	15	18 6 0	0 5 0	Oct. 1866
3000	W. Chiverton, *l*, Perranzabuloe†	10	0 0	56	15 7 6	2 0 0	Nov. 1866
400	West Wheal Seton, *c*, Camborne†	47	10 0	132½	464 14 0	2 10 0	Dec. 1866
512	Wheal Basset, *c*, Illogan†	5	2 6	67	622 0 0	1 0 0	Oct. 1866
1024	Wheal Friendship, *c*, Devon	20	0 0	—	300 10 0	0 10 0	Nov. 1866
4295	Wheal Kitty, *t*, St. Agnes	5	4 6	—	2 19 0	0 1 6	May, 1866
1024	Wheal Mary Ann, *l*, Menheniott	8	0 0	11½	60 7 6	0 10 0	Dec. 1866
2000	Wheal Rose, *c*, Scorrier			—	1 0 0	0 10 0	Feb. 1866
396	Wheal Seton, *t, c*, Camborne	58	10 0	140	235 15 0	4 0 0	Dec. 1866
1040	Wheal Trelawny, *s-l*, Liskeard	5	17 0	12	54 5 6	0 5 0	Dec. 1866
17000	Wicklow, *c, l*, Wicklow	2	10 0	23½	45 15 0	0 18 0	Oct. 186

BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

1200	Bryn Gwyn, *l*, Mold*	9	0 0	—	3 3 6	0 13 6	Aug. 1865
2880	Clifford Amalgamated, *c*, Gwen	32	0 0	10	35 6 0	0 10 0	June, 1865
1055	Craddock Moor, *c*, St. Cleer	11	5 0	—	7 12 0	0 4 0	June, 1865
6000	East Carn Brea, *c*, Redruth	3	15 0	3¼	0 5 0	0 5 0	June, 1865
6000	New Birch Tor and Vitifer Cons. *t*	1	6 6	—	0 13 0	0 2 0	Oct. 1865
6000	West Basset, *c*, Illogan†	1	10 0	1	26 14 0	0 5 0	July, 1865
1024	Wheal Exmouth, *l*, Christow	—		—	—	0 2 6	Oct. 1865

FOREIGN DIVIDEND MINES.

15000	Cape Copper Mining*†	7	0 0	9¼	2 12 6	0 10 0	April, 1866
21500	East Indian Coal, Calcutta	10	0 0	—	—	—	
25000	Fortuna, *l*, Spain*†	2	0 0	2¼	1 5 4	0 2 0	Oct. 1866
20000	Gen. Mining Assoc., Nova Scotia†	20	0 0	22	22 9 0	1 0 0	June, 1866
10000	Gonnesa, *l*.* [5000 £5 pd., 5000 £4 pd.]	—		—	7½ per cent. per annum.		
15000	Linares, *t*, Spain*†	3	0 0	1	111 6 4	0 5 0	Jan. 1865
50000	Panniello, *c***	3	0 0	3½	10 per cent.		Yearly.
10000	Pontgibaud, *s-l*, France†	20	0 0	8	4 3 2	1 2 6	Dec. 1866
100000	Port Phillip, *g*, Clunes†	1	0 0	1	0 15 6	0 1 0	July, 1866
120000	Scottish Australian Mining Co.†	1	0 0	⅞	7½ per cent.		Dec. 1866
11000	St. John del Rey, Brazil*†	15	0 0	53	72 15 0	4 0 0	Dec. 1866
40000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 0	0 1 0	Jan. 1866
10000	West Canada Mining Company*†	1	0 0	—	0 19 6	0 2 6	May, 1865

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Alten and Quænangen United, *c**	4	10 0	—	4 5 0	0 15 0	Nov. 1853
20000	Australian, *c*, South Australia†	7	7 6	—	0 2 0	0 1 0	June, 1866
2464	Burra Burra, *c*, South Australia	5	0 0	—	325 0 0	5 0 0	Dec. 1864
12000	Cobre Copper Company, *c*, Cuba†	40	10 0	1	101 0 0	1 0 0	Jan. 1865
10000	Copiapo Mining Company, Chili†	16	10 0	—	6 18 0	0 10 0	Nov. 1862
100000	Don Pedro No. del Rey, Brazil*†	0	14 0	⅞	0 9 0	0 9 0	Dec. 1863
70000	English and Australian, *c*	2	10 0	—	1 12 0	2 0 0	Aug. 1864
68000	Kapunda Mining Co., Australia†	1	0 0	—	0 12 0	0 1 0	June, 1864
7927	Lusitanian (Portugal)†	3	0 0	—	1 7 0	0 3 0	June, 1865
103815	Mariquita and New Granada†	1	0 0	—	9 6	0 1 6	July, 1859
43174	United Mexican, *s*, Mexico	28	5 0	2	2 19 0	0 5 0	Sept. 1864
10000	Vancouver, *cl***	6	0 0	—	0 15 0	0 5 0	Nov. 1864
45000	Yudanamutana, *c*, S. A.*†	3	0 0	1¾	0 5 0	0 5 0	Aug. 1863

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
135000	Alamillos, *l*, Spain*†	2 0 0	1½	¾ 1¼	Fully pd.
100000	Anglo-Brazilian, *g*†	0 9 0	—		Nov. 1866
40000	Brittany Silver-Lead Mines, France* [15750 18s. pd.]	—	—	—	
25000	Capula, *s*, Mexico*†	1 12 0	—	—	Aug. 1866
30000	Chontales, *g, s*, Nicaragua*†	3 0 0	3	2¾ 3	Oct. 1866
10000	Copiapo Smelting, Chili*	10 0 0	—		April, 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
25000	East del Rey, *g*, Brazil*†	2 15 0	—	—	June, 1866
15000	El Chico Silver Mining and Reduction Company*	4 10 0	—	—	Jan. 1866
8000	English and Canadian Mining Company*	5 0 0	—	—	Fully pd.
50000	Frontino and Bolivia, *g*, New Granada*†	1 12 6	3s.	—	Dec. 1866
80000	Great Northern, *c*, South Australia*†	1 11 6	—	—	Sept. 1862
10000	Great Barrier Land, Mining, &c., New Zealand*	5 0 0	—	—	Fully pd.
12500	Nerbudda Coal and Iron*† [6000 £5 pd., 6500 £4 pd.]	—	—	—	Aug. 1865
50000	Nova Scotia Land and Gold*	1 15 0	—	—	Sept. 1865
15000	Otea, *c*, New Zealand* [5000 fully paid]	1 10 0	—	—	April, 1866
6000	Peel River Land and Mineral*†	100 0 0	—	—	Stock.
30000	Pestarena, *g*††	2 0 0	2½	1⅞ 2⅛	Aug. 1866
17000	Quebrada, *c*, Venezuela*†	10 0 0	—	—	Fully pd.
10178	Rhenish Consolidated, *l* [6000 £5 pd., 4178 £2 10s. pd.]	—	—	—	May, 1866
50000	Rossa Grande, *g*, Brazil*	0 7 6	—	—	April, 1864
15000	San Pedro del Monte, *s*, Mexico*	4 0 0	—	—	Sept. 1866
10000	San Roque, *l*, Spain	5 0 0	—	—	Fully pd.
1000	Schlossberg Colliery*	10 0 0	—	—	
30000	Val Antigoria, *g*††	0 17 6	—	—	July, 1866
6000	Val Sassam, *s, c, l*††	6 10 0	—	—	Jan. 1867
5000	Valgodemard Mining Company*	20 0 0	—	—	Fully pd.
50000	Vallanzasca, *g*, Italy*†	0 15 0	—	—	July, 1866
45000	Victor Emanuel, *c*, Italy*	1 0 0	—	—	Fully pd.
20000	Washoe, *g*	5 0 0	—	—	Fully pd.
80000	Worthing, *c*, South Australia*†	1 0 0	¼	¼ ½	Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	—		Fully pd.

BANKS AND FINANCIAL COMPANIES.

Shares.	Banks.	Paid.	Last Pr.	Bus. done.
40000	Alliance*†	25 0 0	19	18 19
40000	Australian Mort. Land and Finance†	5 0 0	5	4¾ 5¼
20000	Australasia†	40 0 0	63	63 65
10000	Bank of Egypt†	25 0 0	31	29 31
50000	Bank of New Zealand†	10 0 0	18½	18 20
25000	Bank of Otago*†	10 0 0	6	6 8
15000	Bank of Queensland*†	25 0 0	10	7 9
20000	Bank of Victoria, Australia†	25 0 0	39	37 39
8915	Canada Company†	32 10 0	80	70 75
50000	Canadian Loan and Investment*†	2 10 0	1½	
48000	Chart. Bank India, Aust. & China†	20 0 0	16¾	18 18½
30000	Char. Merc. India, Lond. & China†	25 0 0	35	32 34
50000	City†	10 0 0	16	14 15
20000	Colonial†	25 0 0	36	39 41
40000	Company of African Merchants.*†	3 0 0	3	3 3½
150000	Consolidated Bank*†	4 0 0	5	4¼ 5
200000	Credit Foncier and Mobilier of England*†	8 0 0	3	2¾ 3
20000	East London*†	5 0 0	4	3 4
30000	English, Scottish, & Aust., Chart.†	20 0 0	17¼	
20000	English and Swedish*†	25 0 0	14½	13 15
250000	General Credit and Finance of London*†	6 0 0	4¾	
20000	Imperial Bank*†	20 0 0	24	25 27
150000	International Financial Society*†	5 0 0	3¼	2¾ 2⅞
300000	International Land Credit*†	6 0 0	2½	2 3
4000	London African Trading*†	10 0 0	5	
50000	London Chartd. Bank of Australia†	20 0 0	22½	21½ 22¼
37500	London and County†	20 0 0	65	67 69
40000	London Financial Association*†	25 0 0	9¼	7 9
72000	London Joint-Stock†	15 0 0	42	43 45
10000	London and South-Western*†	20 0 0	18	17 18
50000	London and Westminster†	20 0 0	94	97 99
50000	Mercantile and Exchange*†	12 10 0	—	
17156	Metropolitan and Provincial*†	20 0 0	10½	
30000	Mineral Rights Association*	1 0 0	—	
20000	National of Australia†	4 0 0	6	5 6
20000	National of Liverpool*†	15 0 0	—	
40000	National†	30 0 0	70	67 69
50000	New South Wales†	20 0 0	46	41 43
40000	Union of Australia†	25 0 0	50	49 50
80000	Union of London†	15 0 0	45	44 45

PROGRESSIVE MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
4000	Ballacorkish, I. of Man, *l, c**	1 10 0	—		Oct. 1866
3000	Bedford Unit., *c*, Tavistk.*	2 6 8	—		
3200	Bedol Aur, *l*, Holywell	1 7 0	—		Nov. 1866
500	Billins, *l*, Flint	30 0 0	—		Fully pd.
1000	Blaendyffryn, *s-l**	2 0 0	—		Mar. 1866
1248	Boscaswell, *t, c*, St. Just	7 6 0	—		Dec. 1866
5000	Bottle Hill, *t*, Plympton	1 14 6	—		June, 1866
200	Brynford Hall, *l*, Flint	28 0 0	—		Jan. 1866
5000	Bryn Gwiog, *l*, Flint	9 0 0	—		June, 1864
30000	Caldbeck Fells, *l*, Cumber.*	1 10 0	—		Dec. 1866
1000	Camborne Consols, *c*	18 10 0	—		Feb. 1864
4600	Camborne Vn. & Wh. Fran.	11	8 10	1	July, 1866
11000	Cape Cornwall, *t, c** [8000 £2 10s. pd., 3000 10s. pd.]				Oct. 1866
12000	Caradon & Phœnix* [2500 20s. pd., 9500 12s. pd.]				April, 1865
914	Caradon Cons., *c*, St. Cleer	31	3 6	—	Nov. 1866
1000	Carn Brea, *c, t*, Illogan	25	0 0	20	15 17½	Nov. 1866
6000	Carn Camborne, *c*, Cambn.	2	0 6	1⅛	1 1¼	Oct. 1866
5000	Carnarvonshire, *l**	4	0 0	—		Fully pd.
4005	Cardigan Cons.* [1000 £5 pd., 3005 £4 5s. pd.]					April, 1866
600	Cardiganshire, *l**	17	10 0	—		Sept. 1866
20000	Carysfort [3200 £2½ pd., 16800 £1⅜ pd.]					Mar. 1865
66000	Castell Carn Dochan, *g**	0	8 6	—		
2500	Cefn Cilcen, *l*, Flint*	2	18 0	—		Aug. 1866
2300	Central Minera, *l**	3	12 6	—		Nov. 1866
16000	Central Snailbeach *l*	1	0 0	—		Fully pd.
3000	Chiverton, *l*, Perranzabu	9	2 6	7	8¼ 9	Nov. 1866
3000	Chiverton Moor, *l*, Perranz.	5	18 6	5½	5½ 6	Nov. 1866
16000	Coolartra & Bond* [5300 £1 pd., 10700 16s. pd.]					Feb. 1865
256	Condurrow, *c, t*, Camborne	76	10 0	—		
5000	Connorree, *c, sul*, Wicklow*	1	0 0	—		Fully pd.
2450	Cook's Kitchen, *c*, Illogan	19	14 9	12	10½ 11	July, 1866
1024	Copper Hill, *c*, Redruth	12	10 0	—		June, 1866
6500	Cornish Clay and Tin*	1	0 0	—		Fully pd.
6000	Cornwall Great Consols	1	8 0	—		May, 1866
861	Crane, *c*, Camborne	33	9 6	—		Dec. 1866
12000	Crelake, *c*, Tavistock	3	8 0	—		July, 1866
6000	Cuddra, *t*, St. Austell	5	0 0	—		Oct. 1866
35000	Dale, *l*, North Stafford	1	0 0	3s.	1s. 3s.	Fully pd.
1000	Darren, *l*, Cardigan*	12	4 0	—		Oct. 1866
5000	Devon Great Maria*	7	0 0	—		May, 1866
4000	Devon Wheal Frances, *c*	1	5 3	—	1⅞ 2	Dec. 1866
1024	Devon Wheal Lopes, *c**	17	0 0	—		July, 1866
12800	Drake Walls, *t*, Calstock	2	5 0	¾	¾ 1	Dec. 1866
656	Ding Dong, *t*, Gulval	49	14 6	—		Dec. 1866
20000	Dolfrwyngo, *g**	0	15 0	—		June, 1864
25000	Dundalk, Ireland, *l**	0	12 6	—		April, 1866
3000	Dyfngwm, *l*, Wales	13	7 0	—	8 8¼	June, 1866
1000	Eaglebrook, *l**	17	19 0	—		Feb. 1865
512	East Basset, *c*, Redruth†	3	5 0	—	22½ 23½	
1000	East Basset and Grylls, *t*	3	5 0	—		July, 1865
6000	E. Bottle Hill, *t*, Plympton	0	6 6	¼	3s. 5s.	Oct. 1865
4096	East Brookwood, Holne	2	8 8	—		July, 1866
2000	East Buller, *c*, Gwennap	2	0 0	—		Mar. 1865
4000	East Chiverton, *l*, Perranz.	2	9 3	2½	2 2¼	Dec. 1866
2048	E. Falmouth, *s-l*, Kenwyn.	5	0 6	—		April, 1864
6000	E. Grenville, *c*, Camborne	3	3 6	2½	2¼ 2½	Nov. 1866
4000	E. Gunnislake & S. Bed. *c*	0	0 6	—		Aug. 1866
6000	East Holyford, *c*, Ireland*	3	0 0	—		Oct. 1866
6145	East Jane, *s-l*, Cardinham	2	17 6	—		April, 1865
6000	East Laxey, *l*, Isle of Man*	2	10 0	—		Dec. 1865
1000	East Moor, *s*	0	5 0	—		Aug. 1866
3986	E. Providence, *t*, Uny Lel.	4	19 9	—		Nov. 1866
5000	E. Tresavean, *c*, Gwennap.	0	10 0	—		May, 1865
6000	East Snaefell, *l*, I. of Man*	2	0 0	—		Dec. 1864
5610	East Seton, *c*, Camborne	0	11 0	—	¾ 1	Oct. 1865
9000	E. St. Just, *t** [6000 £3 10s. pd., 3000 £1 10s. pd.]					Nov. 1866
256	East Tolgus, *c*, Redruth	96	0 0	—		April, 1866
1190	E. Wh. Agar, *c*, St. Cleer	12	17 0	—		Jan. 1865
4000	E. Wh. Russell, Tavistock†	11	14 0	2¾	2 2¼	Oct. 1866
15000	Ellen Unit., *c, z*, St. Agnes*	1	0 0	—		Nov. 1866
6000	Fortescue Consols, *c*	0	12 6	—		
940	Fowey Con., *c*, Tywardreath	5	1 6	—		June, 1866
6000	Furze Hill Wood Con. Buckl.	1	16 0	—		Feb. 1866
10000	Fursdon, *c** [5000 £1 10s.]	—	—	—		Mar. 1865
1026	Garden, *t*, Morvah	5	12 9	—		Mar. 1865
4096	Garlidna Unit., *t*, Wendron	5	7 7	—		Feb. 1866
4000	Gawton, *c*, Tavistock	3	5 6	—		Feb. 1866
6000	Gen. Min. Co. for Ireland, *c*	4	0 0	—		
40000	Glasgow Caradon *c** [30000 £1 pd., 10000 10. pd.]					Sept. 1866
6144	Gonamena, *c*, St. Cleer	5	16 6	—		Dec. 1866
6000	Gothic, *s-l*, Cardigan*	2	10 0	—	2¾ 2⅞	Fully pd.
486	Grambler and St. Aubyn†	70	0 0	—	5 6	Nov. 1866
4096	Great Caradon, *c*, St. Ives	3	11 0	—		Nov. 1866
5000	Gt. East Lovell, *t*, Helston	2	1 0	—		Nov. 1866
5000	Great Mona, *l*, Isle of Man*	3	10 0	—		June, 1866
5000	Great North Downs, *c*	5	18 0	3½	3½ 4	Oct. 1866
12500	Gt. No. Laxey (Isle of Man)*	0	12 6	—	1¼ 1½	Jan. 1867
6000	Great Retallack, *s-l, b*	1	19 0	1¾	34s. 36s.	Oct. 1866
6000	Great South Chiverton, *s-l.*	1	9 6	—		July, 1866
6000	Gt. So. Tolgus, *c*, Redruth	0	19 6	⅞	16s. 18s.	Aug. 1866
3000	Great West Chiverton, *l*	1	0 0	—		June, 1864
3313	Great Wheal Baddern, *t*	7	17 6	—		June, 1863
1798	Gt. Wh. Fortune, *t*, Breage	27	2 6	5	6 6½	Dec. 1866
119	Great Work, *t*, Germoe	100	0 0	—		
2500	Grit and Stapeley, *l**	10	0 0	—		July, 1864
10240	Gunnislake (Clitters'), *t, c*	4	15 0	—		Aug. 1866
6068	Gwydyr Pk. Con., Llanrwst	1	13 0	—		Nov. 1866
6000	Hallenbeagle, *c*, Kenwyn	2	13 0	6s.		Nov. 1866
6400	Harwood, *l*, Durham*	0	6 0	—		Sept. 1864
5000	Havan, *l*, Cardigan*	4	15 0	—		Mar. 1866
6000	Illogan, *t, c*	0	19 6	—		June, 1866
6000	Lady Bertha, *c*, Tavistock	3	19 6	—		Oct. 1866
3000	Leawood, *c, l*, Lydford	3	3 6	—		June, 1866
1019	Leeds and St. Anbyn, *t, c*	19	13 4	—		Mar. 1866
963	Lelant Cons. *t*, Uny Lelant	35	0 0	—		Mar. 1863
160	Levant, *c, t*, St. Just	10	8 1	—		June, 1866
6000	Levant United, St. Just	0	10 0	—		
1024	Lovell Consols, *t*	—		—	3½	
2000	Lower Park, *l*, Denbigh*	3	11 0	—		Jan. 1864
3000	Maes-y-Safn, *l**	20	0 0	—		Jan. 1866
6000	Mandlin, *c*, Lostwithiel	4	7 0	—		May, 1865
5000	Merllyn, *l*, Flint	—	3 15 6	—		Jan. 1866
3000	Minera Western Boundry*	0	2 6	—		Sept. 1863
4975	Molland, *c*, South Moulton	3	13 0	—		Aug. 1865
640	Mount Pleasant, *l*, Mold	4	0 0	—		
1024	Nangiles, *t, c*, Kea	26	5 0	—		Oct. 1866
4000	Nanteos, *l*, Cardigan*	1	0 0	—		Fully pd.
512	Nant Minera, *l**	6	10 0	—		Jan. 1865
250	Nanty Mines, *l*, Montgom.	30	0 0	—		Aug. 1866
6000	New Clifford, *c*, Gwennap*	2	0 0	—		Mar. 1866
24000	New Cornish [12000 £1 pd., 12000 15s. pd.]					Sept. 1866
6400	N. Crow Hill, *l*, St. Stephen	3	2 0	—		Nov. 1866
6514	New E. Russell, *c*, Tavistk.	0	10 6	—		Sept. 1866
6400	Nether Hearth, *l*, Dufton	1	1 0	—		May, 1865
400	New Hendra, *t, c*, Breage	14	11 0	—		Mar. 1866
6400	New Pembroke, *t, c*	1	0 6	—		Nov. 1866
6000	New Tamar, *s-l*	0	7 6	—		Dec. 1866
5755	New Treleigh, *c*, Redruth	4	8 0	—		May, 1866
960	New Trevenen, *t*, Wendron	8	14 0	—		May, 1866
4096	New Wheal Lovell, *t*	1	9 0	—		Aug. 1866
400	New Wh. Seton, *c*, Cambn.	35	15 0	35	30 40	Dec. 1866
2000	New Wheal Towan, *c, t*	1	10 0	—		July, 1866
16000	North Devon, *s-l**	0	16 0	—		July, 1866
5000	No. Dolcoath, *c*, Camborne	4	0 0	—		Oct. 1866
3457	North Downs, *c*, Redruth	4	8 10	—		Jan. 1867
1361	No. Grambler, *c*, Redruth	6	19 9	—		Dec. 1866
16000	N. Hallenbeagle [8000 £1 pd., 8000 8s. 6d. pd.]					July, 1865
6000	North Jane, *t, s-l*, Kenwyn.	3	0 6	⅞		Sept. 1866
2000	North Levant, *t, c*, St. Just	10	8 0	—		Sept. 1866
20000	Nth. Minera, *l*, Wrexham*	1	0 0	—		Fully pd.
4000	N. Phœnix, *c*, Linkinghorne	4	0 0	—		May, 1864
6400	North Pool, *c*, Illogan	4	18 6	—		Nov. 1866
700	No. Roskear, *c*, Camborne	48	1 0	—	6 7	Nov. 1866
2000	No. Shepherds, *l*, Newlyn	6	0 0	—		July, 1866
5936	No. Treskerby, *c*, St. Agnes	1	9 0	3⅜	2¾ 3	
6000	North Wheal Basset, *c, t*†	5	0 0	—		April, 1866
5610	North Wheal Crofty, *c*†	3	11 3	4¼	4¾ 5	July, 1866
6144	N. Wh. Robert, Smp. Spiney	4	6 5	—		Feb. 1866
12288	Okel Tor, *c*, Calstock	2	7 4	—		Aug. 1866
8000	Old Gunnislake, *c*, Calstock	2	10 0	—		Aug. 1866
5000	Orseddi, *l*, Flintshire	0	0 8	—		
6400	Par Consols, *c*, St. Blazey†	2	2 0	—		Nov. 1866
6000	Par and St. Blazey Cons. *t, c*	1	18 9	—		Sept. 1866
8465	Pedn-an-drea, *t*, Redruth	5	16 6	—		Dec. 1866
5000	Pendeen Consols, *c*, St. Just	5	15 0	—	1½ 1¾	Oct. 1866
4000	Penhale Wheal Vor, *t, c*	2	15 0	—		Jan. 1867
5000	Penhalls, *t*, St. Agnes	3	0 0	—		May, 1866
15000	Penhale and Lomax, *s-l*	1	10 0	—		Oct. 1866
512	Penhallow Moor, *s-l*	9	10 0	—		Sept. 1865
6000	Penralt, *s-l*, Merioneth*	2	7 0	—		Feb. 1865
200	Pentre Lygan, *l**	30	0 0	—		May, 1865
1772	Polberro, *t*, St. Agnes	15	0 0	—		Fully pd.
512	Polbreen, *t*, St. Agnes	8	0 0	—		Aug. 1866
10000	Prince Arthur Consols, *l**	2	0 0	—		Fully pd
12800	Prince of Wales, *t*, Calstock	0	11 6	2½	30s. 31s.	Nov. 1866
6000	Prosper Un., *t, c*, St. Hilary	8	14 0	3½	3⅞ 4⅛	July, 1866
12000	Redmoor, *c, t*, Callington	1	9 6	—		Feb. 1866
6000	Retnnie Laxey, *l*, I. of Man*	4	0 0	—		Feb. 1866
5000	Rhafna, *l*, Carnarvon*	0	11 0	—		Dec. 1866
1024	Rose and Chiverton Untd.	5	0 0	5¾	5½ 6	Nov. 1866
2000	Rosecliff and Tolcarne*	5	0 0	—		
3973	Rosew